

FIGURE 48

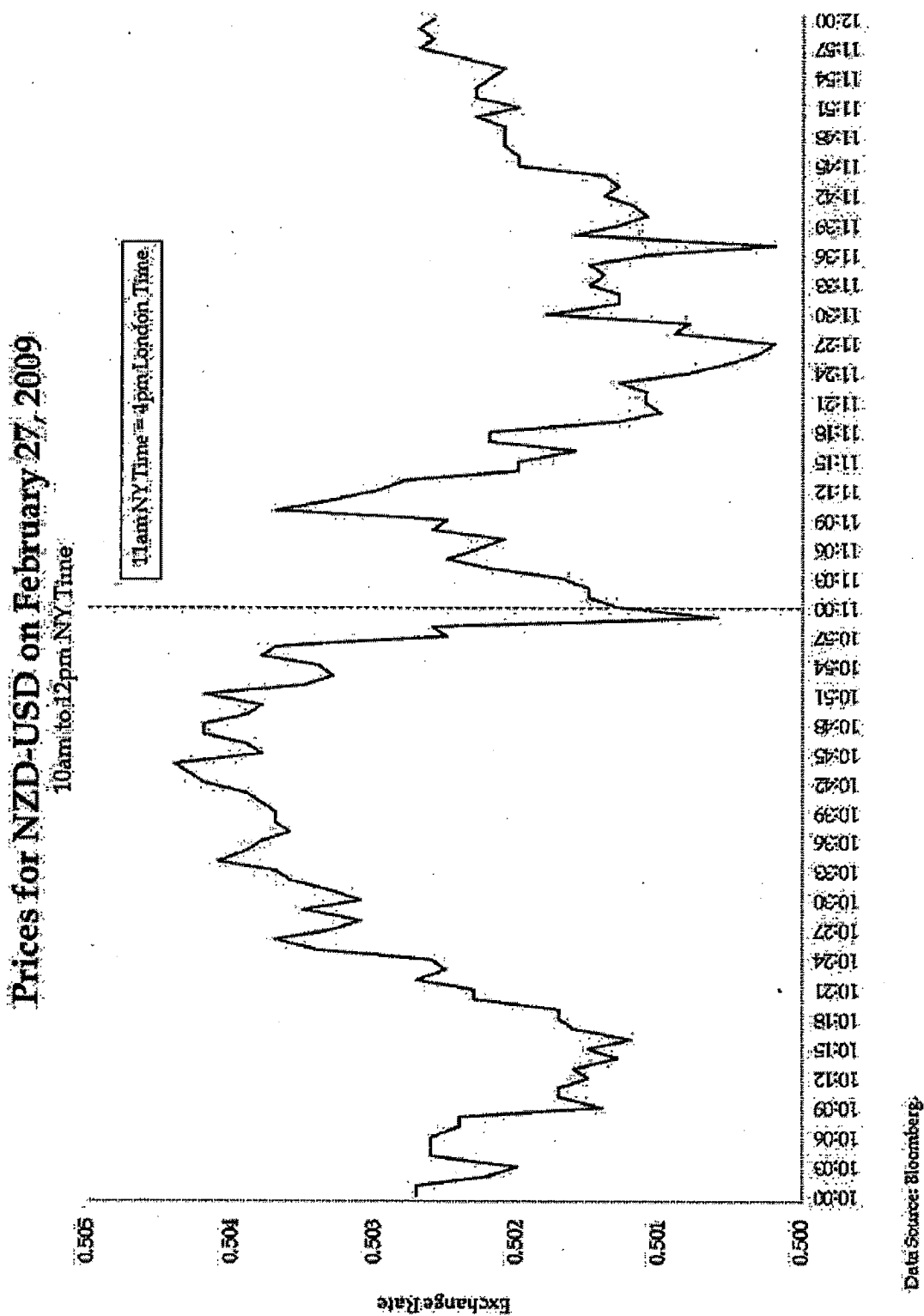


FIGURE 49

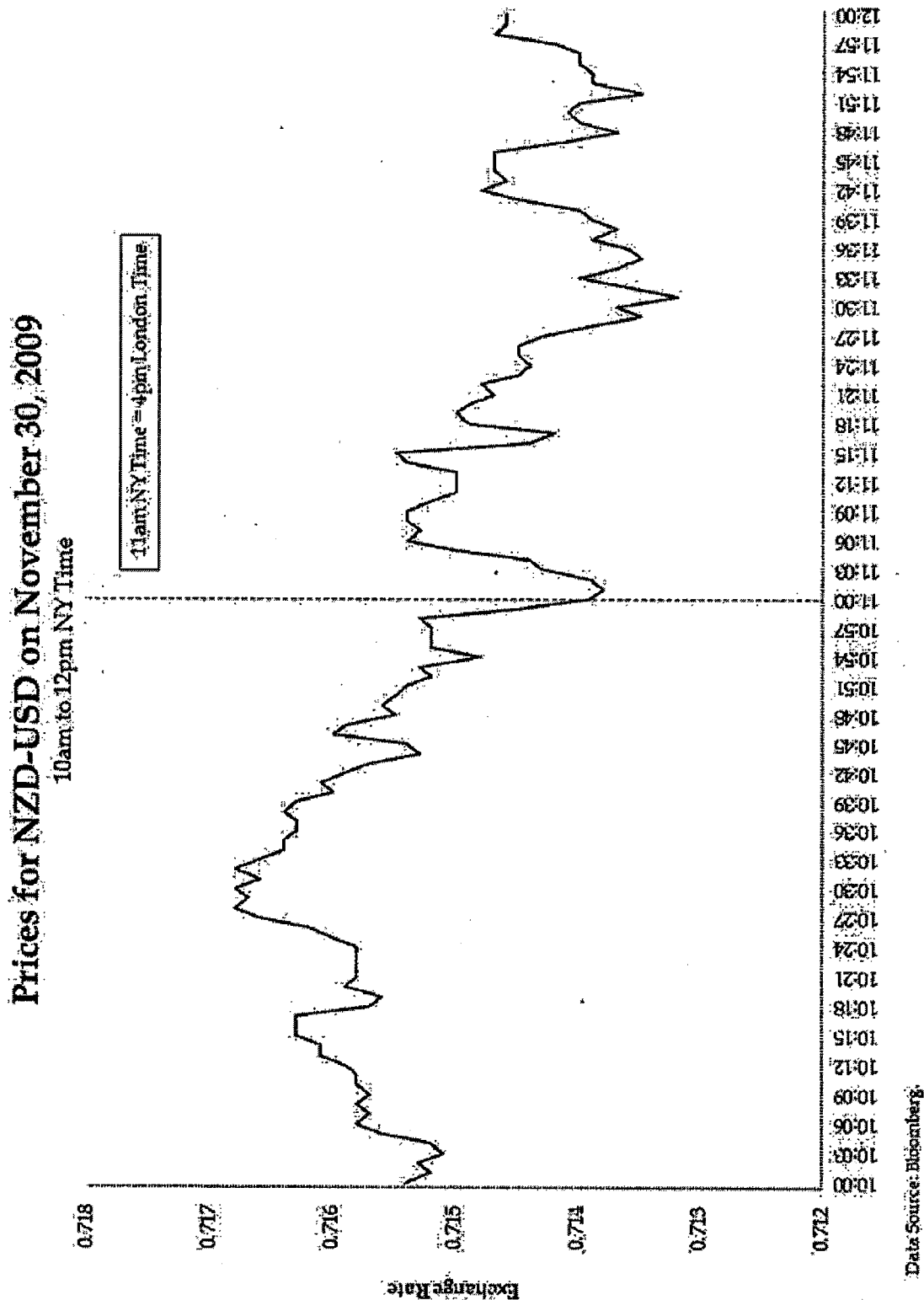


FIGURE 50

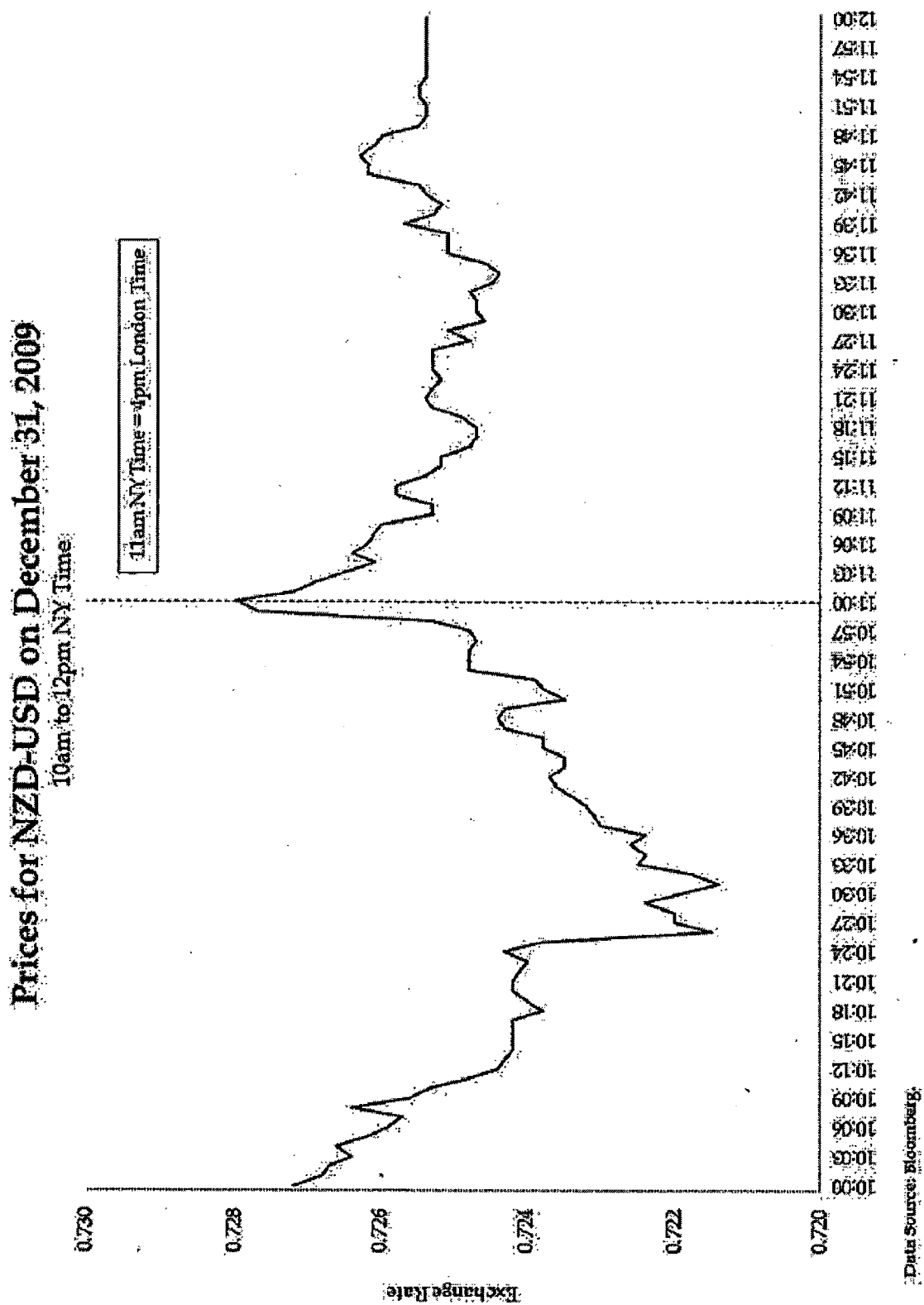


FIGURE 51

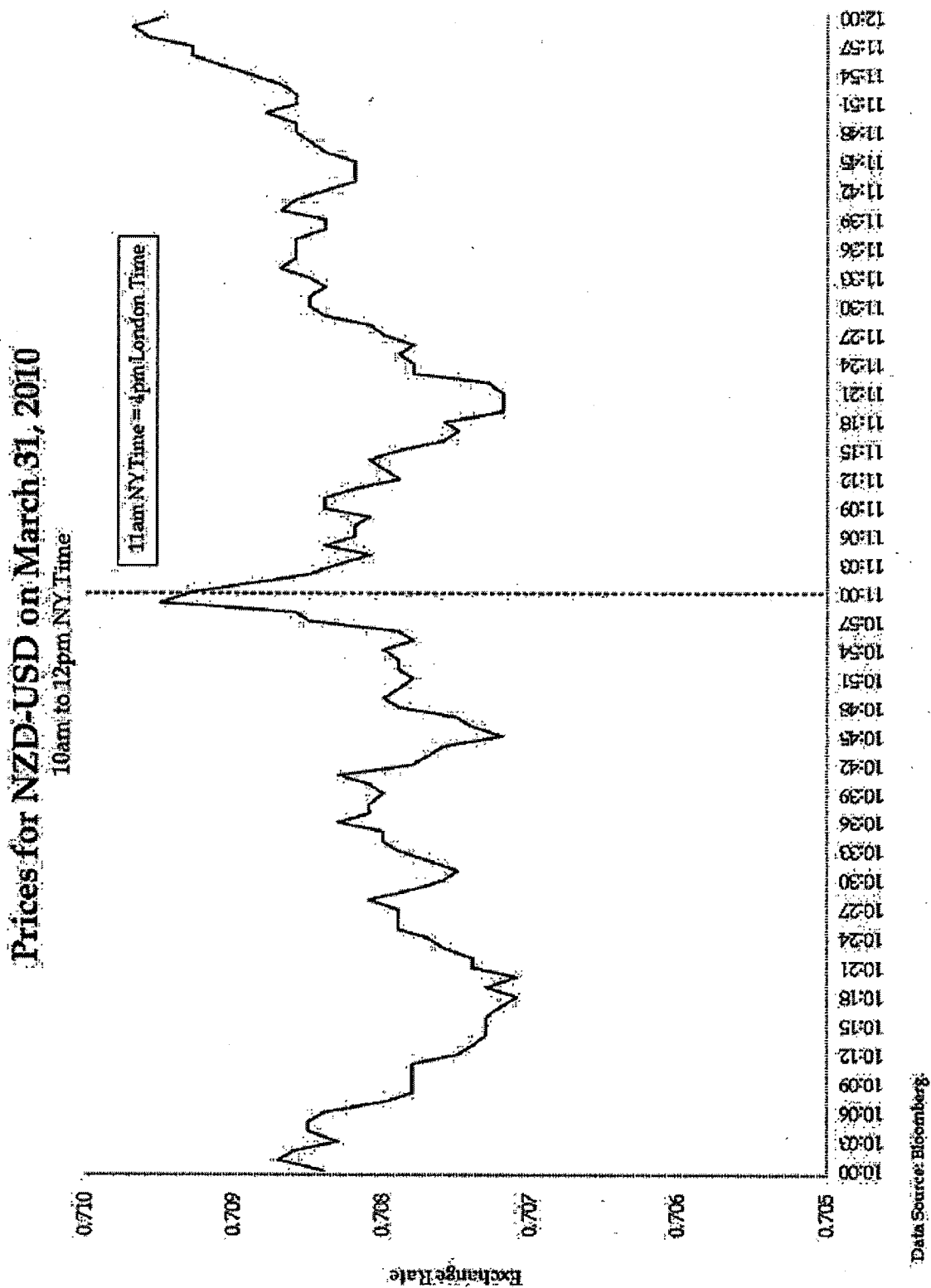


FIGURE 52

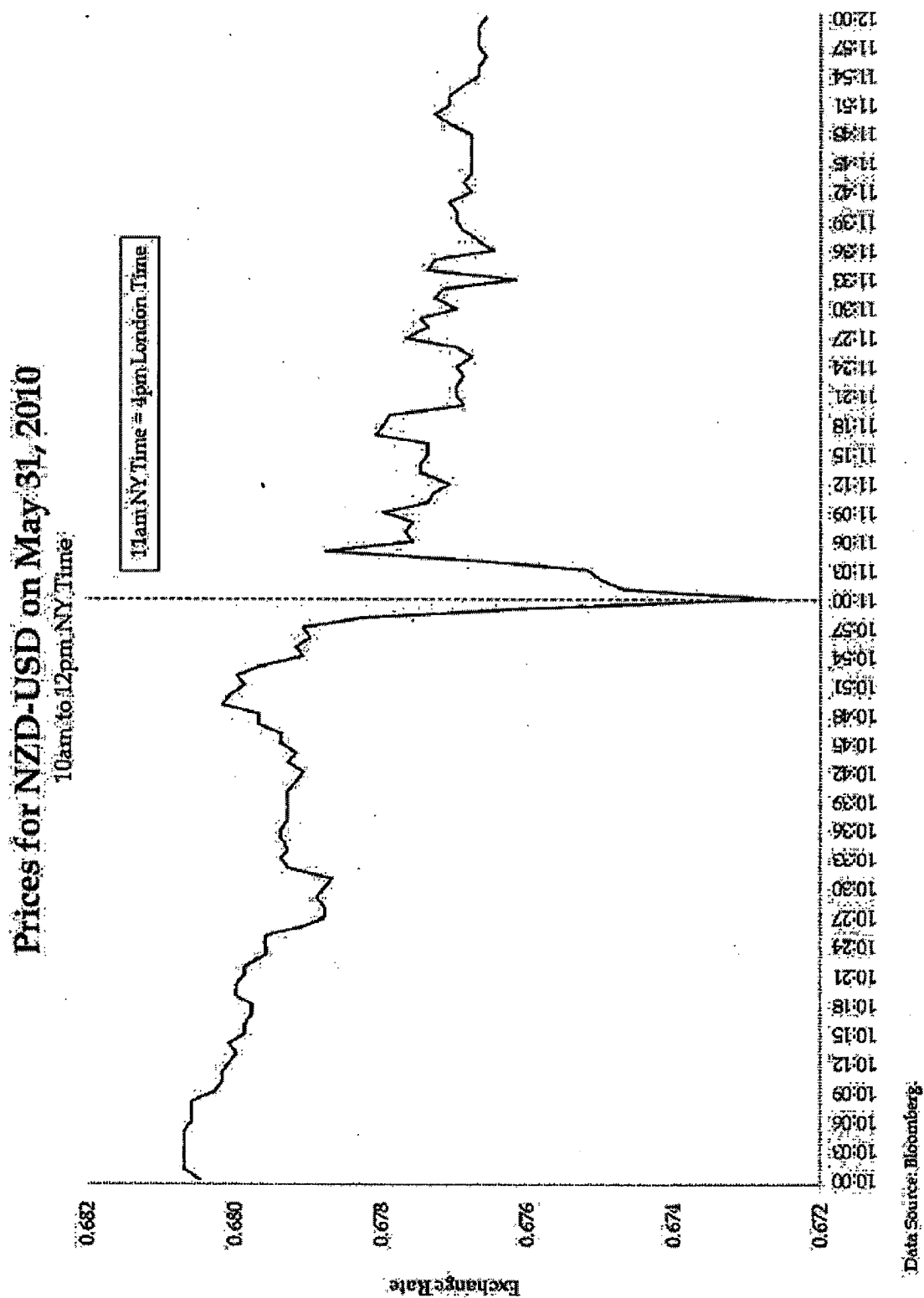


FIGURE 53

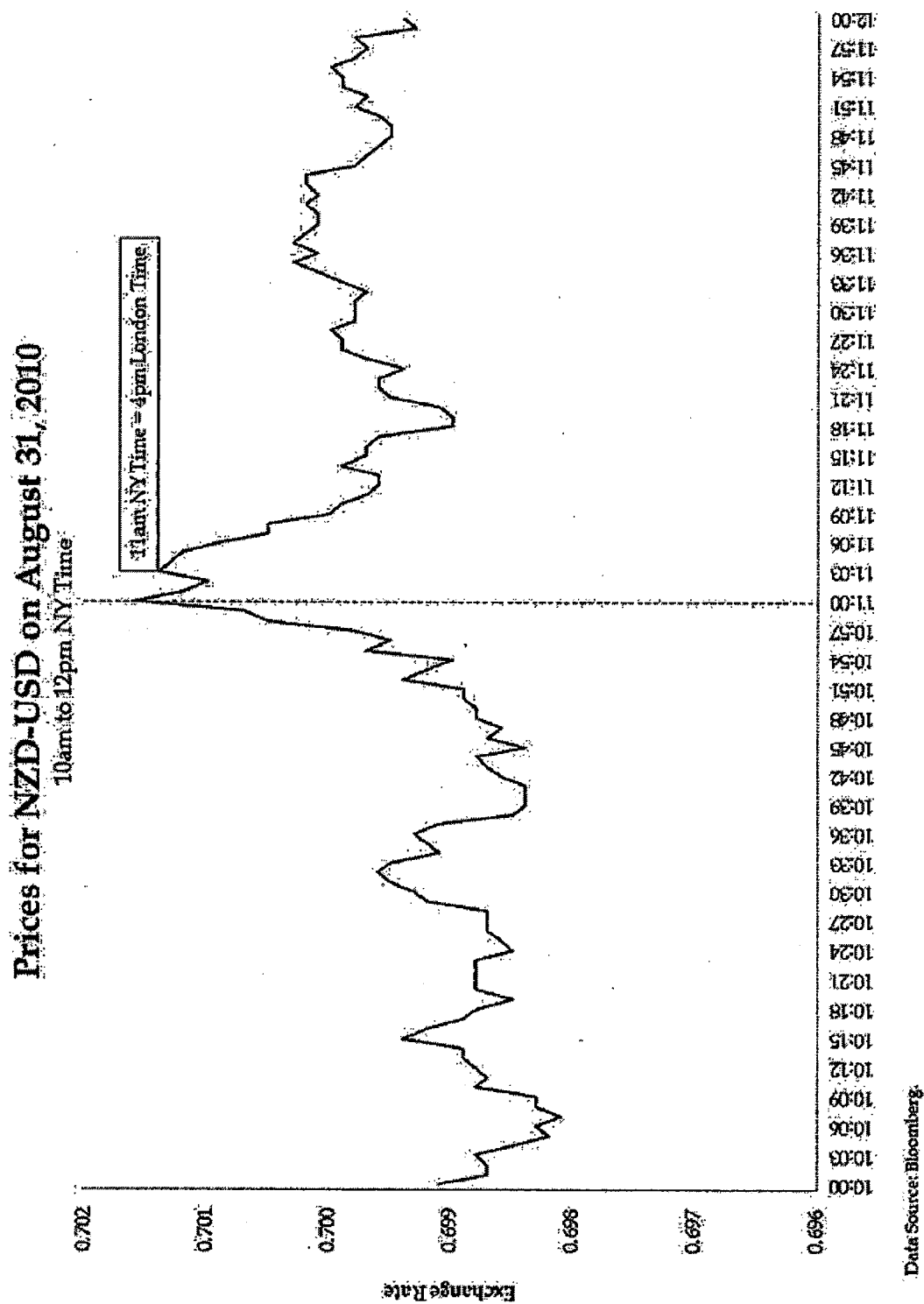


FIGURE 54

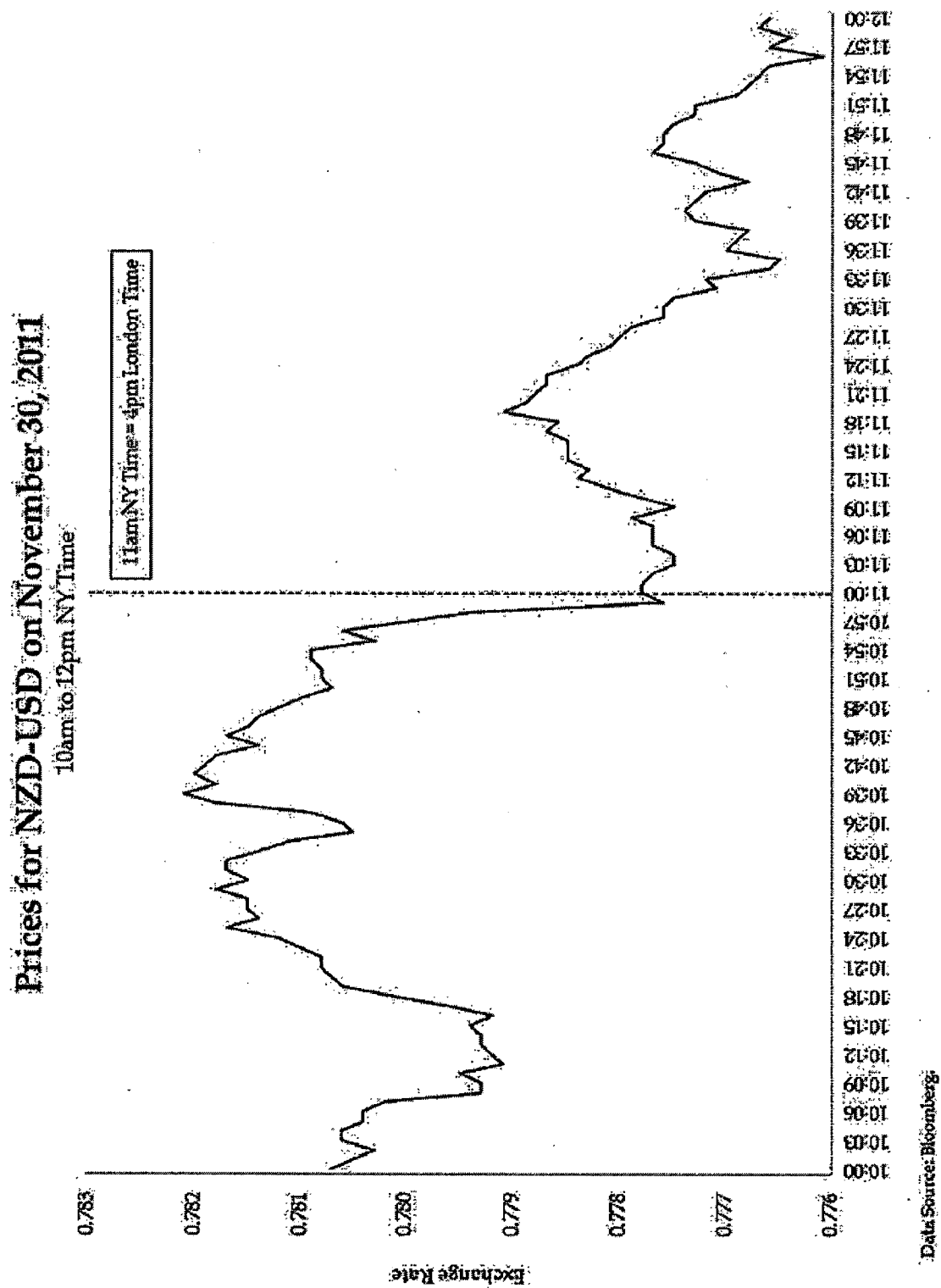


FIGURE 55

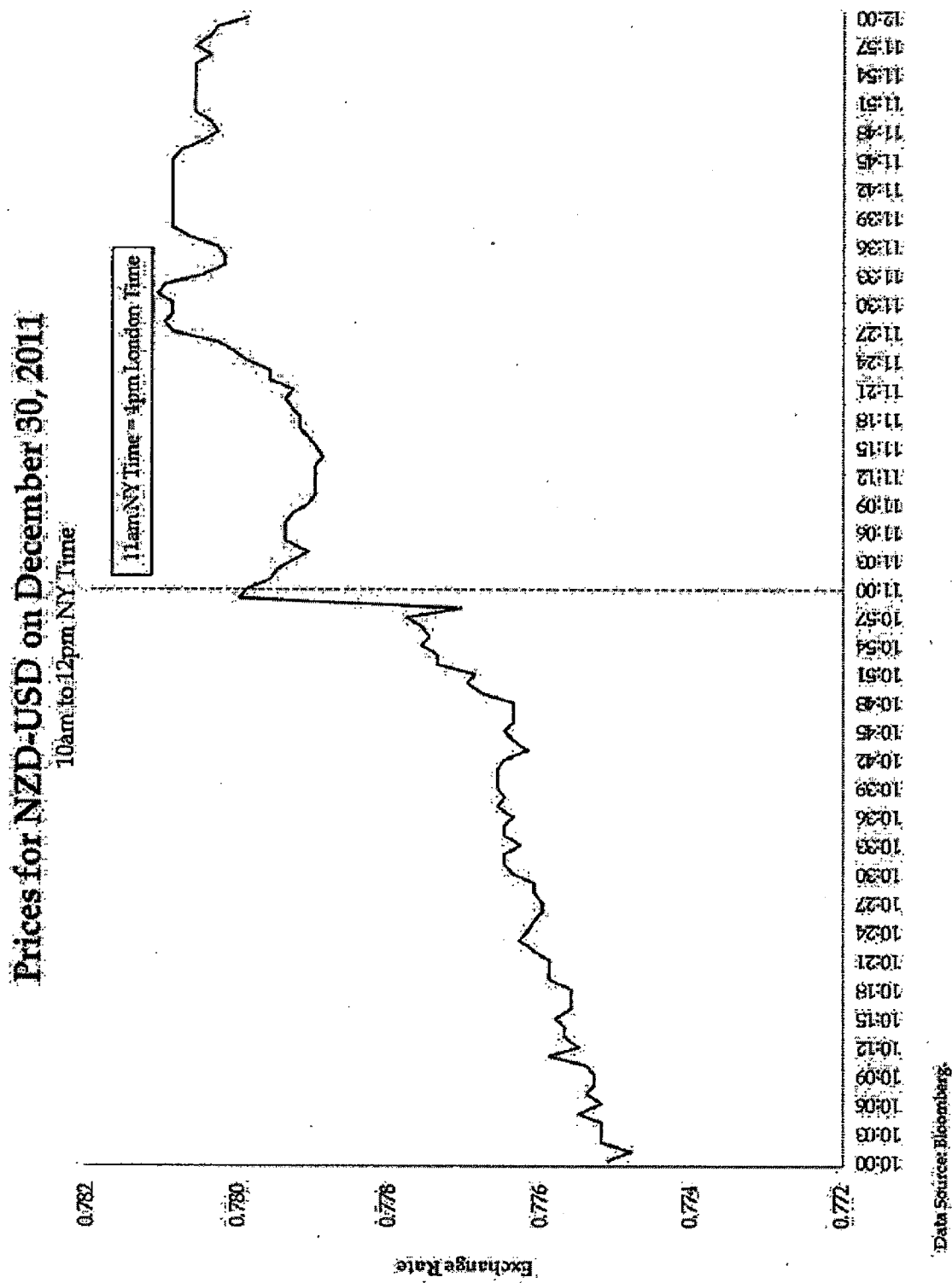


FIGURE 56

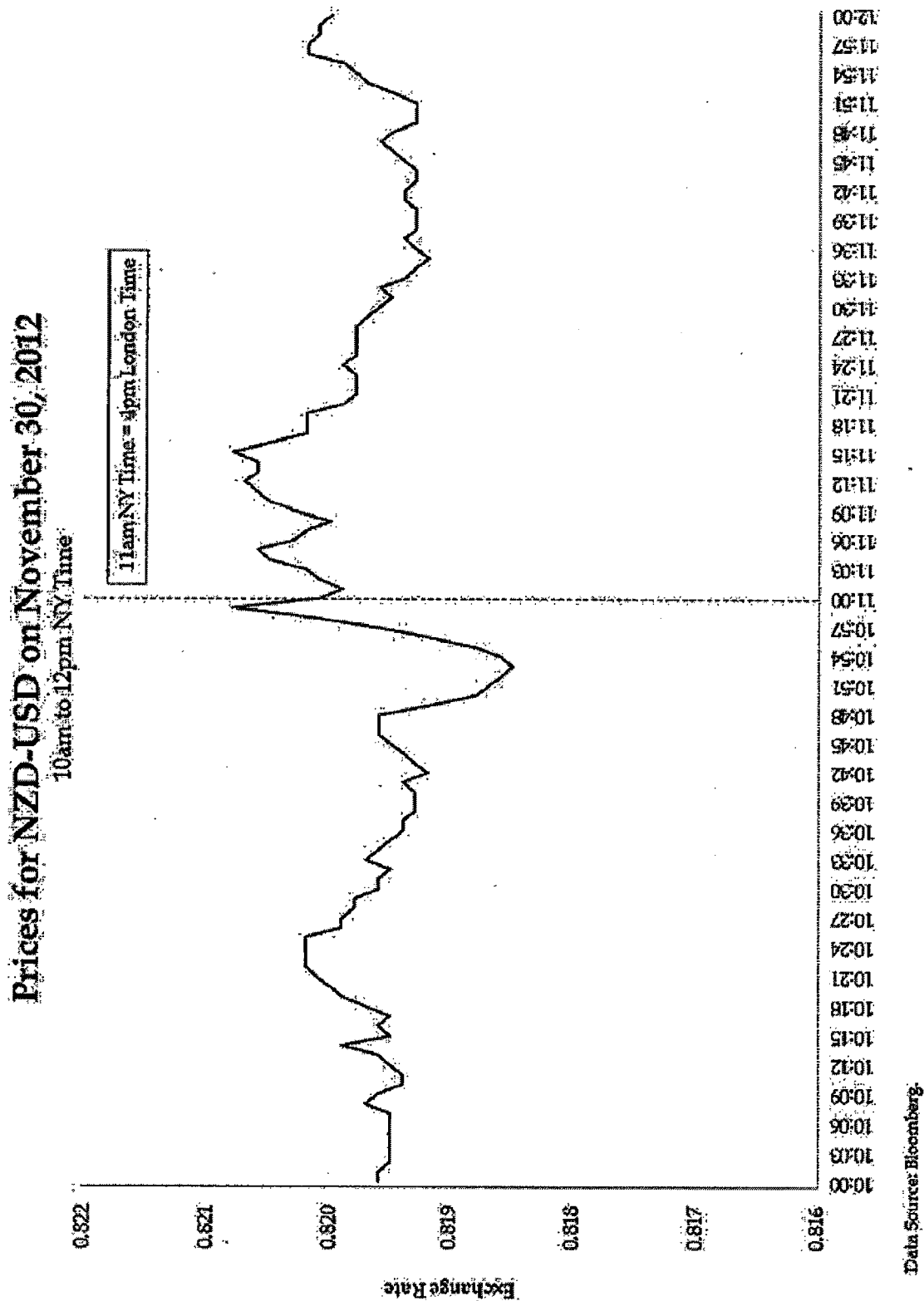
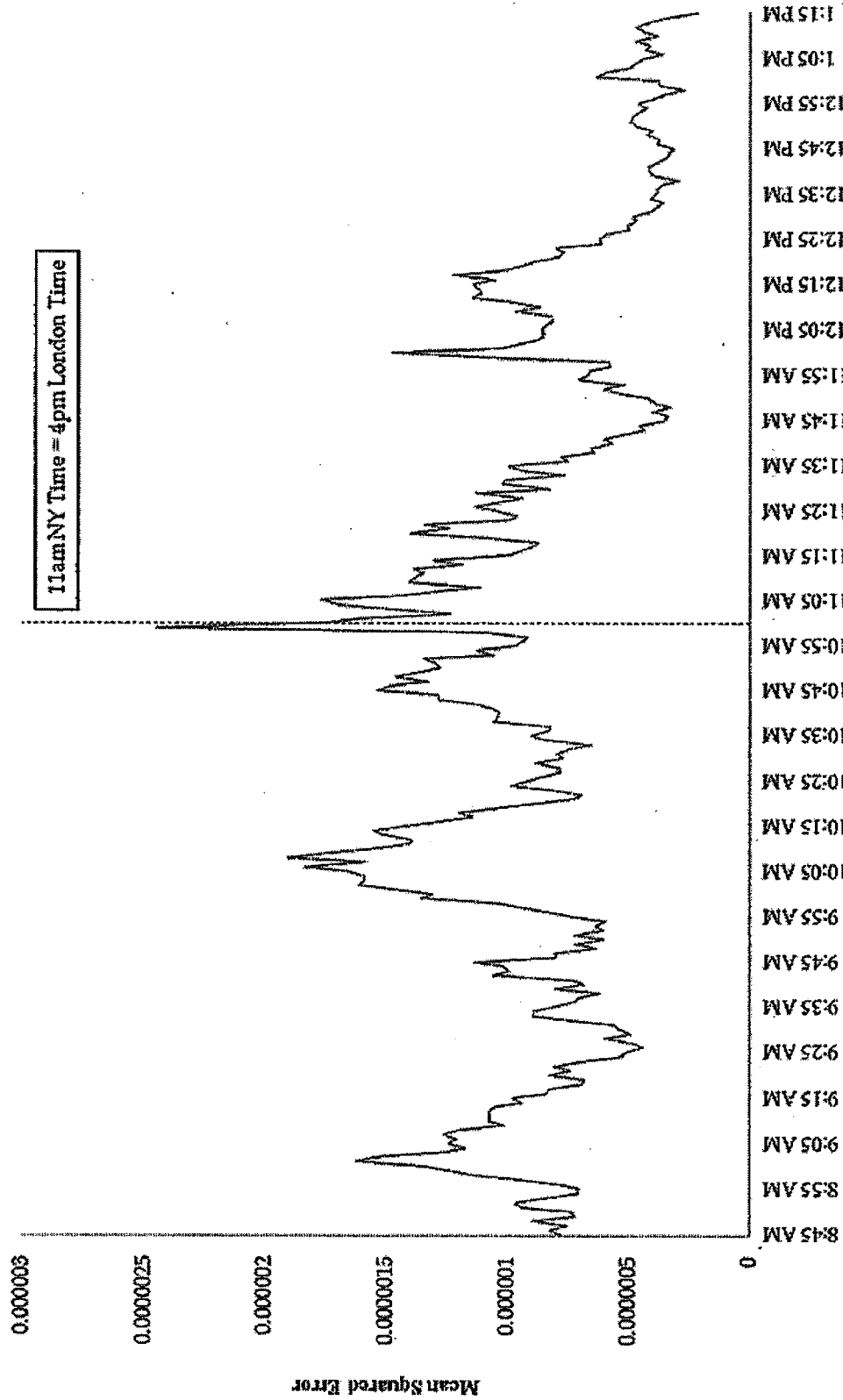


FIGURE 57

USD-CAD: Measure of Outlier Prices Compared to Preceding Prices

Deviations of Prices in One Minute Intervals from 8:45am to 1:15pm NY Time with Respect to Nearby Prices



Data Source: Bloomberg.

Notes: Each measure represents the mean squared error of the minute price with respect to (1) prices during the preceding 30 minutes; (2) prices during the preceding and succeeding 30 minutes; and (3) prices during the succeeding 30 minutes. Large values for the mean squared error represent outlier prices during that minute.

FIGURE 58

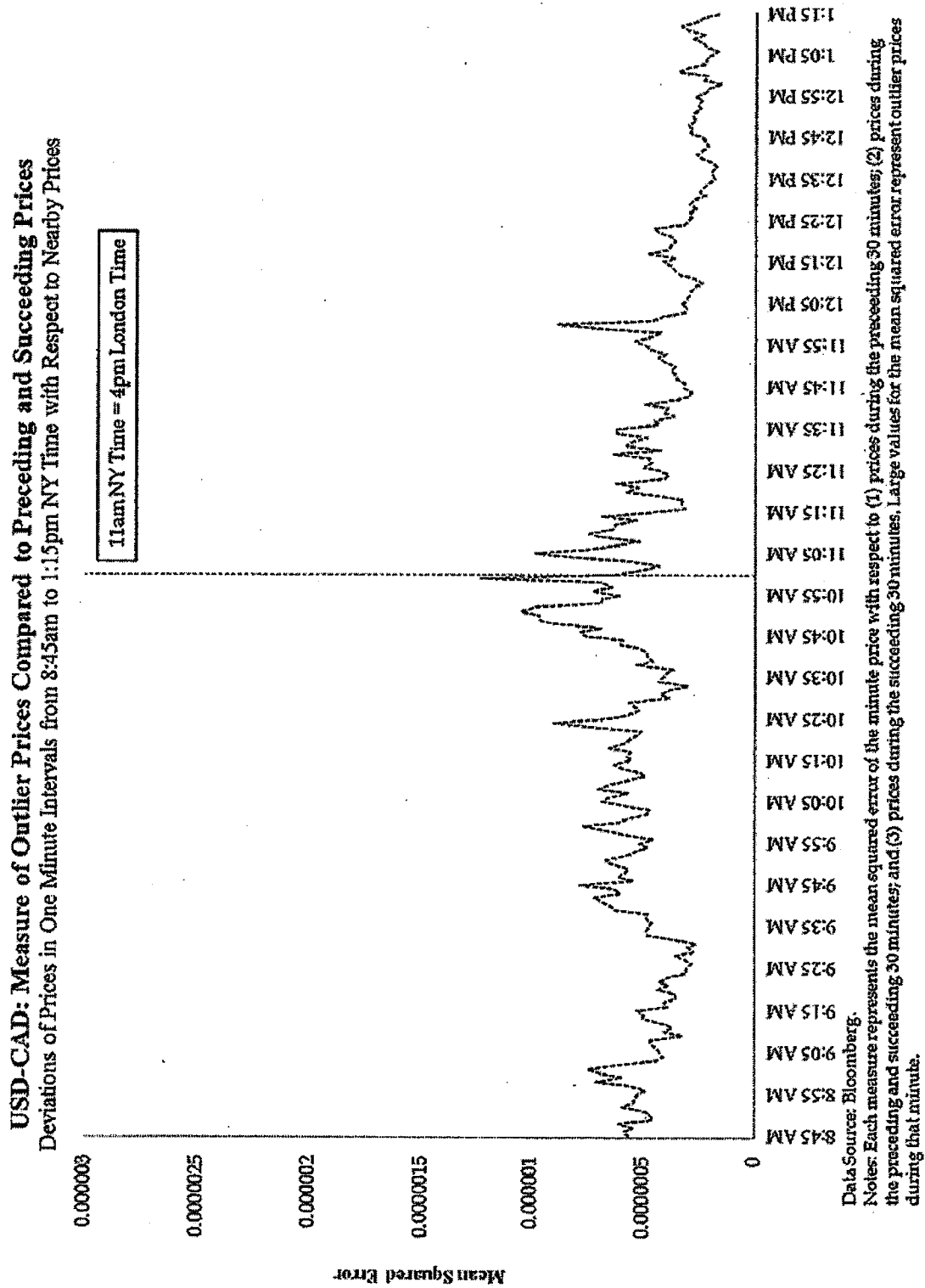


FIGURE 59

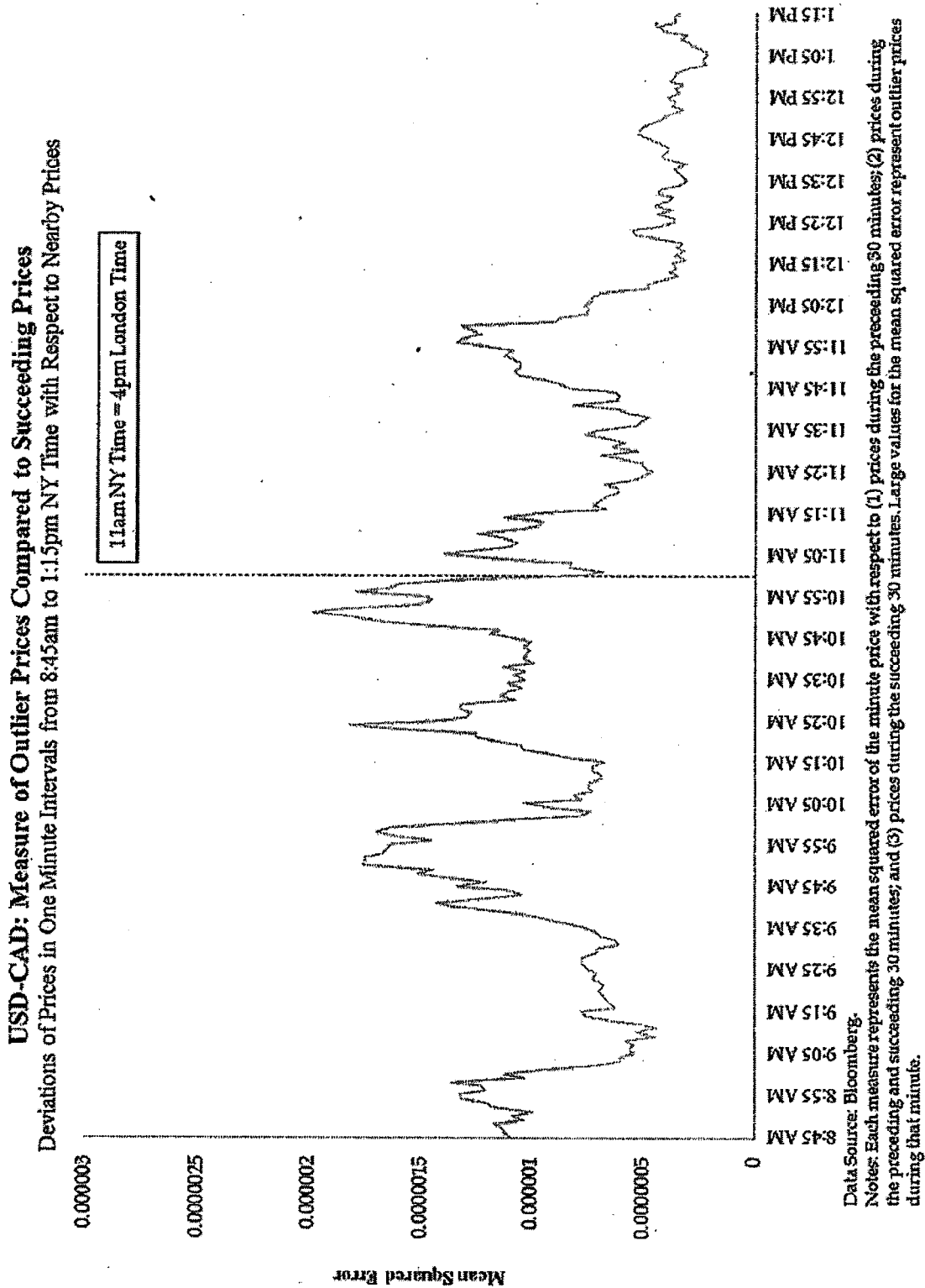


FIGURE 60

USD-CAD: Summary of Outliers				
Last Trading Day of Each Month (Jan 2009 - October 2013)				
		+/- 10 Minutes from 11am NY (4pm London)	+/- 20 Minutes from 11am NY (4pm London)	+/- 30 Minutes from 11am NY (4pm London)
Full Period	Total Number of Days	54	54	54
	Non-Outlier Days	38	32	29
	Number of Outlier Days Comparing Price to Preceding Prices	8	7	5
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	6	10	8
	Number of Outlier Days Comparing Price to Succeeding	2	5	12
	Total Number of Outlier Days	16	22	25
	Number of Outlier Days as a Portion of All Days	29.6%	40.7%	46.3%
2009	Total Number of Days	12	12	12
	Non-Outlier Days	10	8	6
	Number of Outlier Days Comparing Price to Preceding Prices	1	2	3
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	1	1	1
	Number of Outlier Days Comparing Price to Succeeding	0	1	2
	Total Number of Outlier Days	2	4	6
	Number of Outlier Days as a Portion of All Days	16.7%	33.3%	50.0%
2010	Total Number of Days	11	11	11
	Non-Outlier Days	6	5	5
	Number of Outlier Days Comparing Price to Preceding Prices	2	1	0
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	2	4	3
	Number of Outlier Days Comparing Price to Succeeding	1	1	3
	Total Number of Outlier Days	5	6	6
	Number of Outlier Days as a Portion of All Days	45.5%	54.5%	54.5%
2011	Total Number of Days	11	11	11
	Non-Outlier Days	8	7	6
	Number of Outlier Days Comparing Price to Preceding Prices	2	1	2
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	1	3	1
	Number of Outlier Days Comparing Price to Succeeding	0	0	2
	Total Number of Outlier Days	3	4	5
	Number of Outlier Days as a Portion of All Days	27.3%	36.4%	45.5%
2012	Total Number of Days	11	11	11
	Non-Outlier Days	6	5	5
	Number of Outlier Days Comparing Price to Preceding Prices	2	2	0
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	2	2	3
	Number of Outlier Days Comparing Price to Succeeding	1	2	3
	Total Number of Outlier Days	5	6	6
	Number of Outlier Days as a Portion of All Days	45.5%	54.5%	54.5%
2013	Total Number of Days	9	9	9
	Non-Outlier Days	8	7	7
	Number of Outlier Days Comparing Price to Preceding Prices	1	1	0
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	0	0	0
	Number of Outlier Days Comparing Price to Succeeding	0	1	2
	Total Number of Outlier Days	1	2	2
	Number of Outlier Days as a Portion of All Days	11.1%	22.2%	22.2%
Data Source: Bloomberg.				
Note: Interval of time is defined around 11 a.m. NY time / 4 p.m. London time.				

FIGURE 61

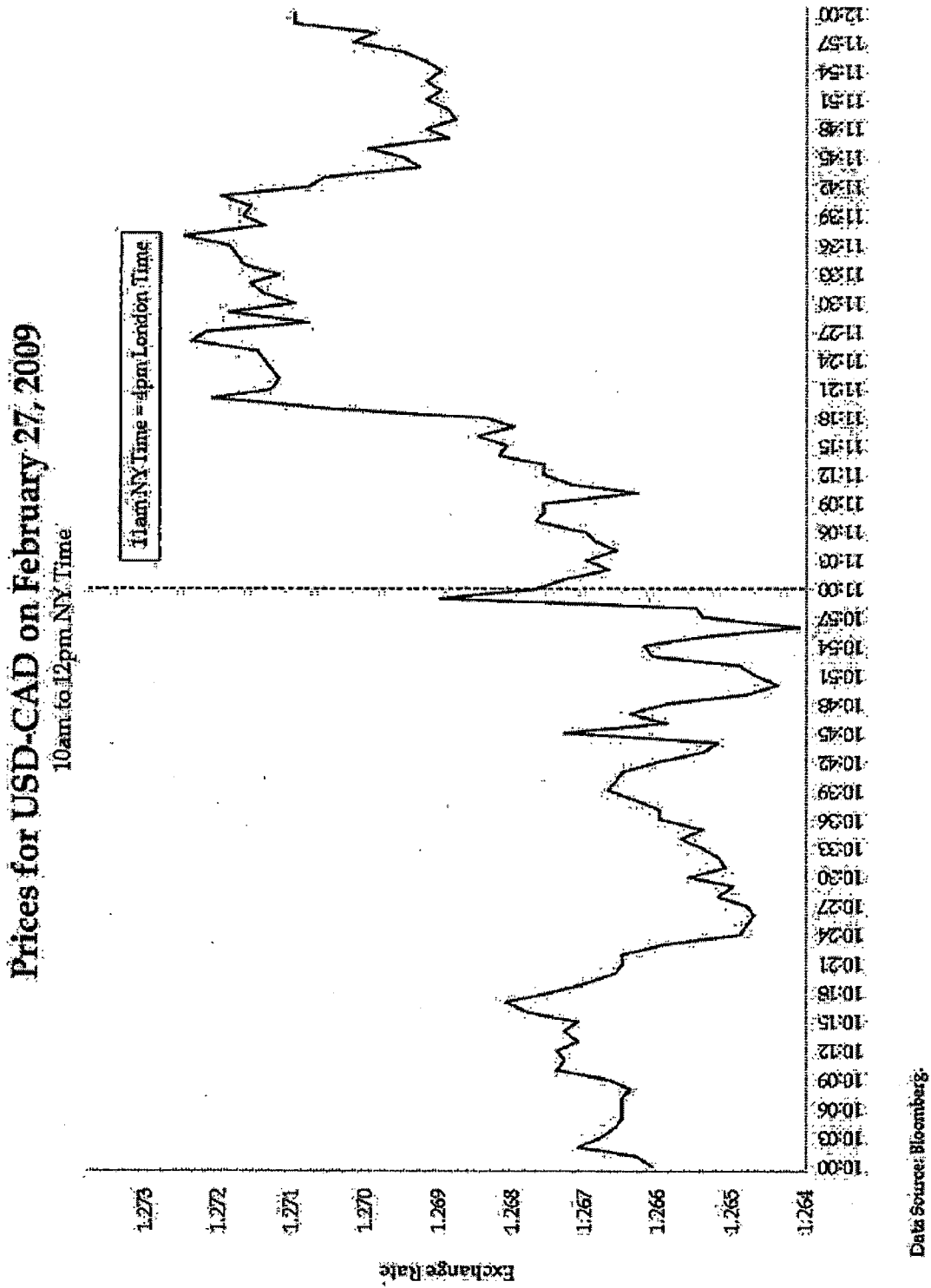


FIGURE 62

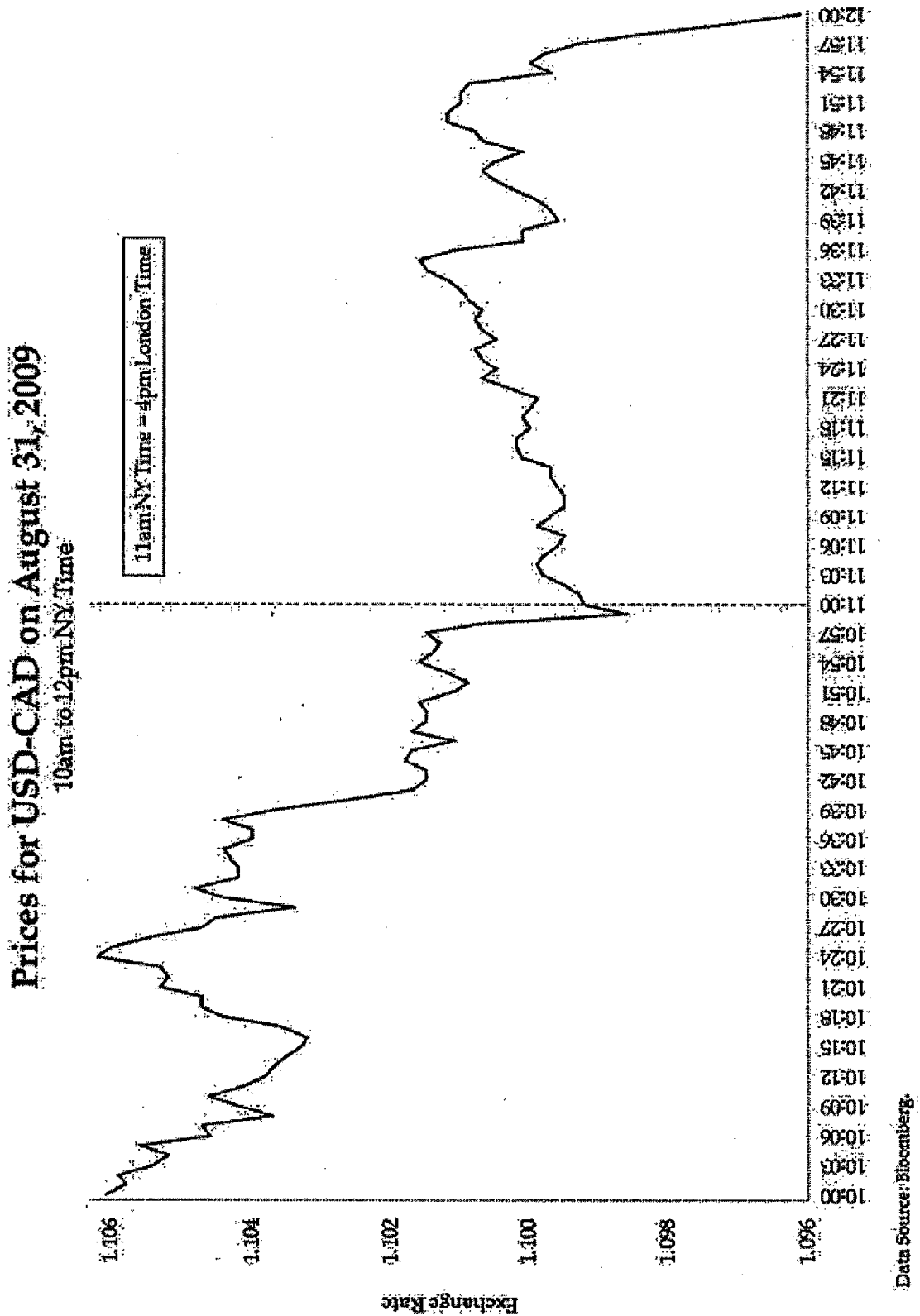


FIGURE 63

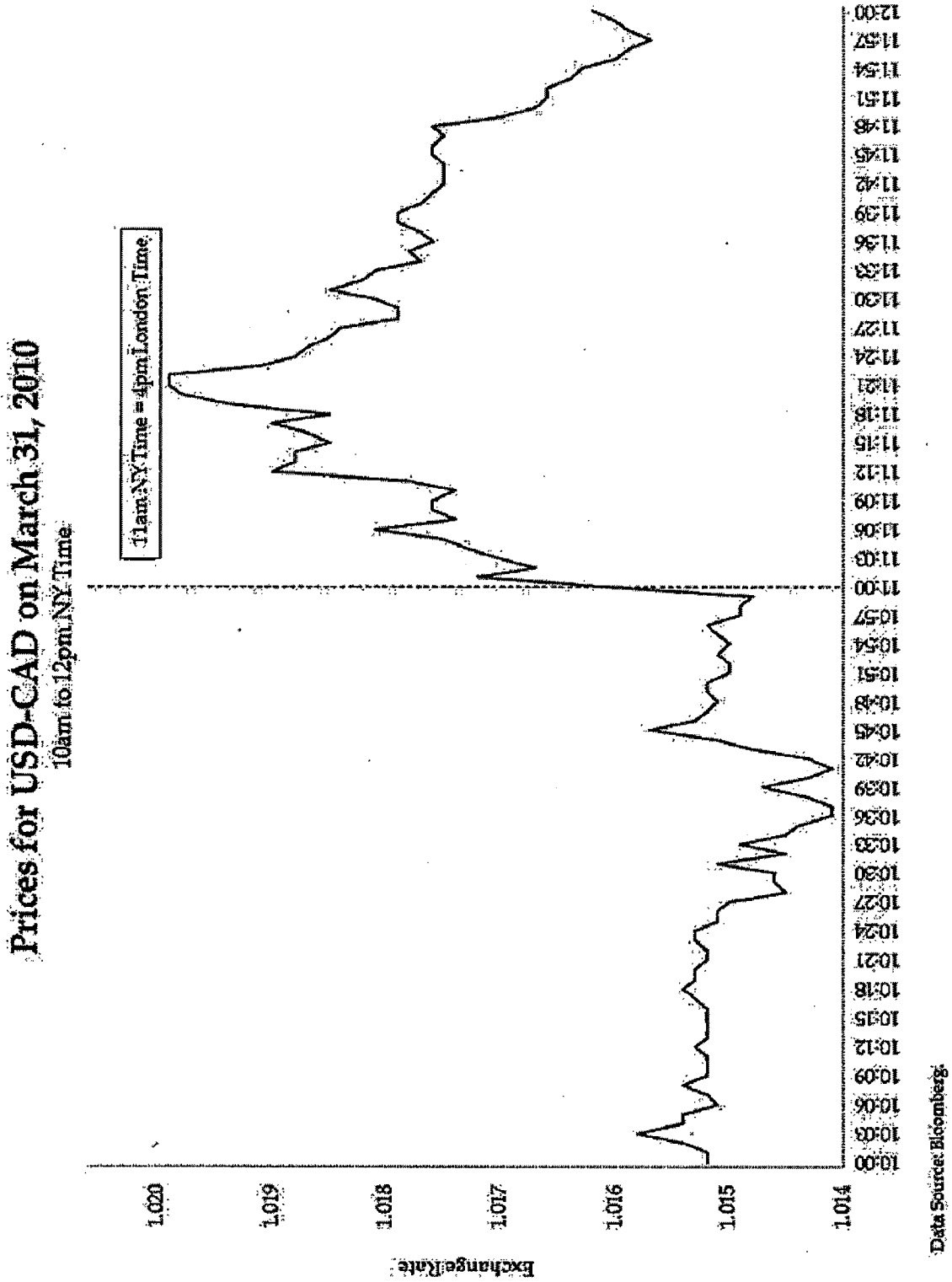


FIGURE 64

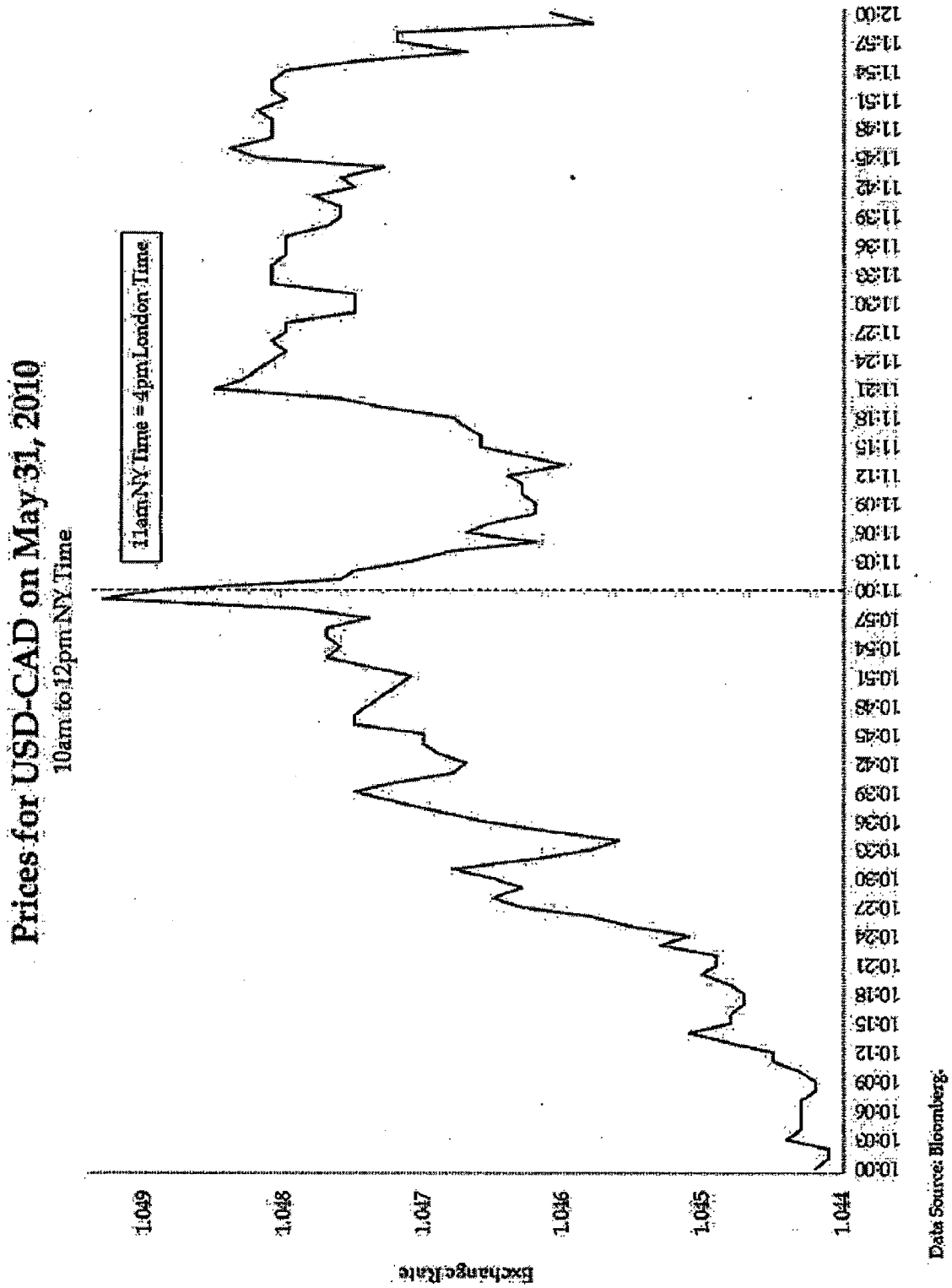


FIGURE 65

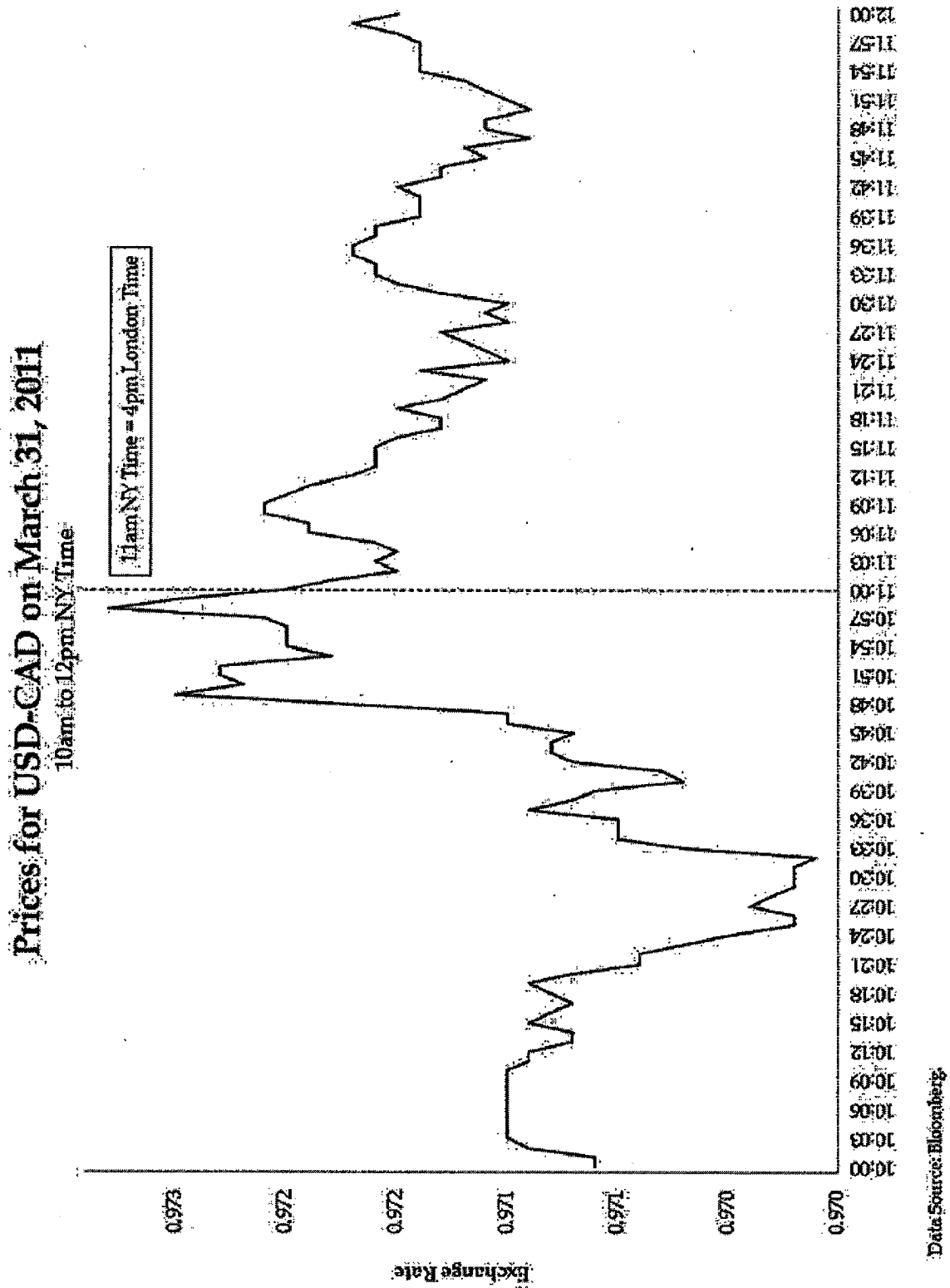


FIGURE 66

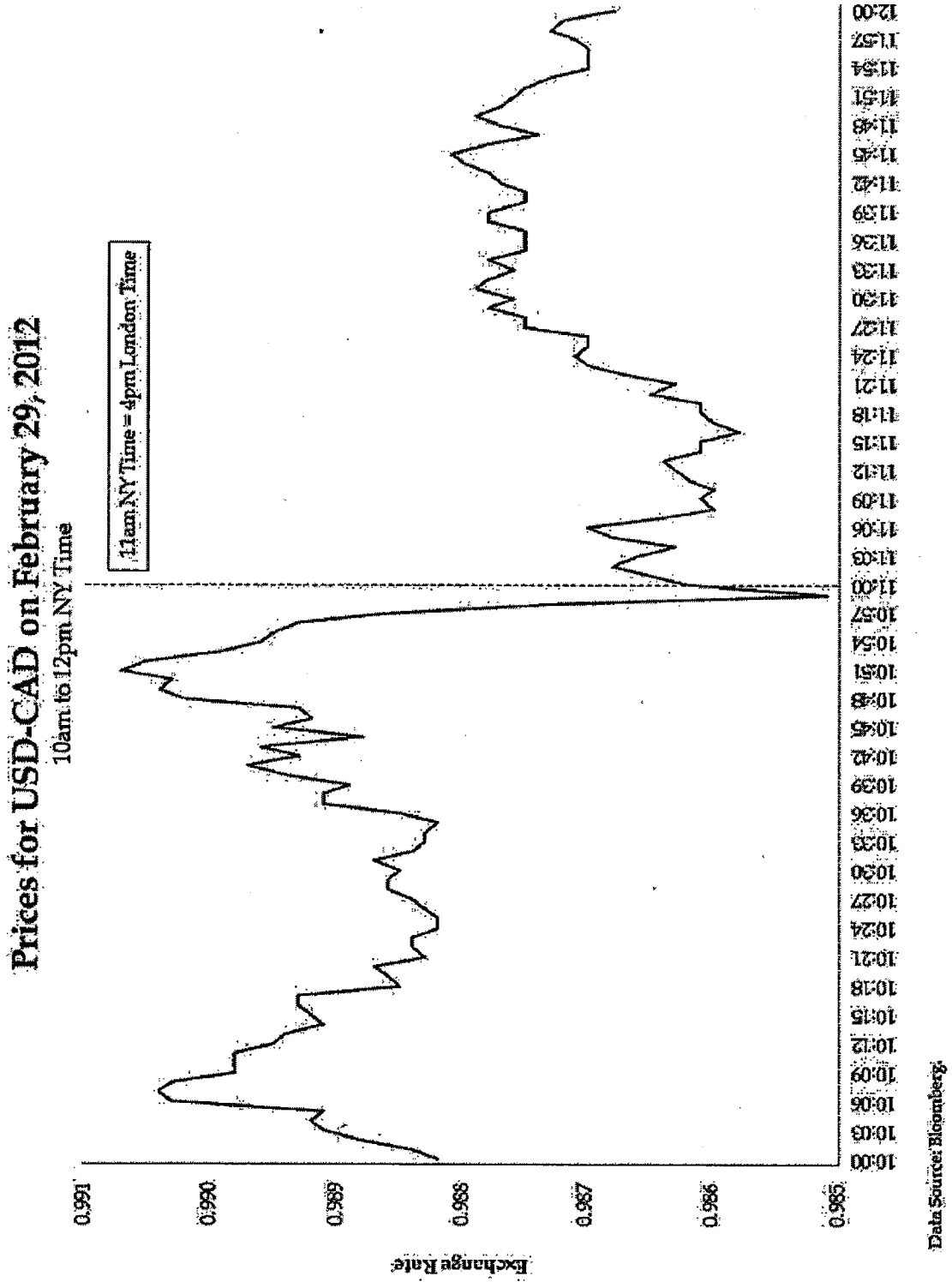


FIGURE 67

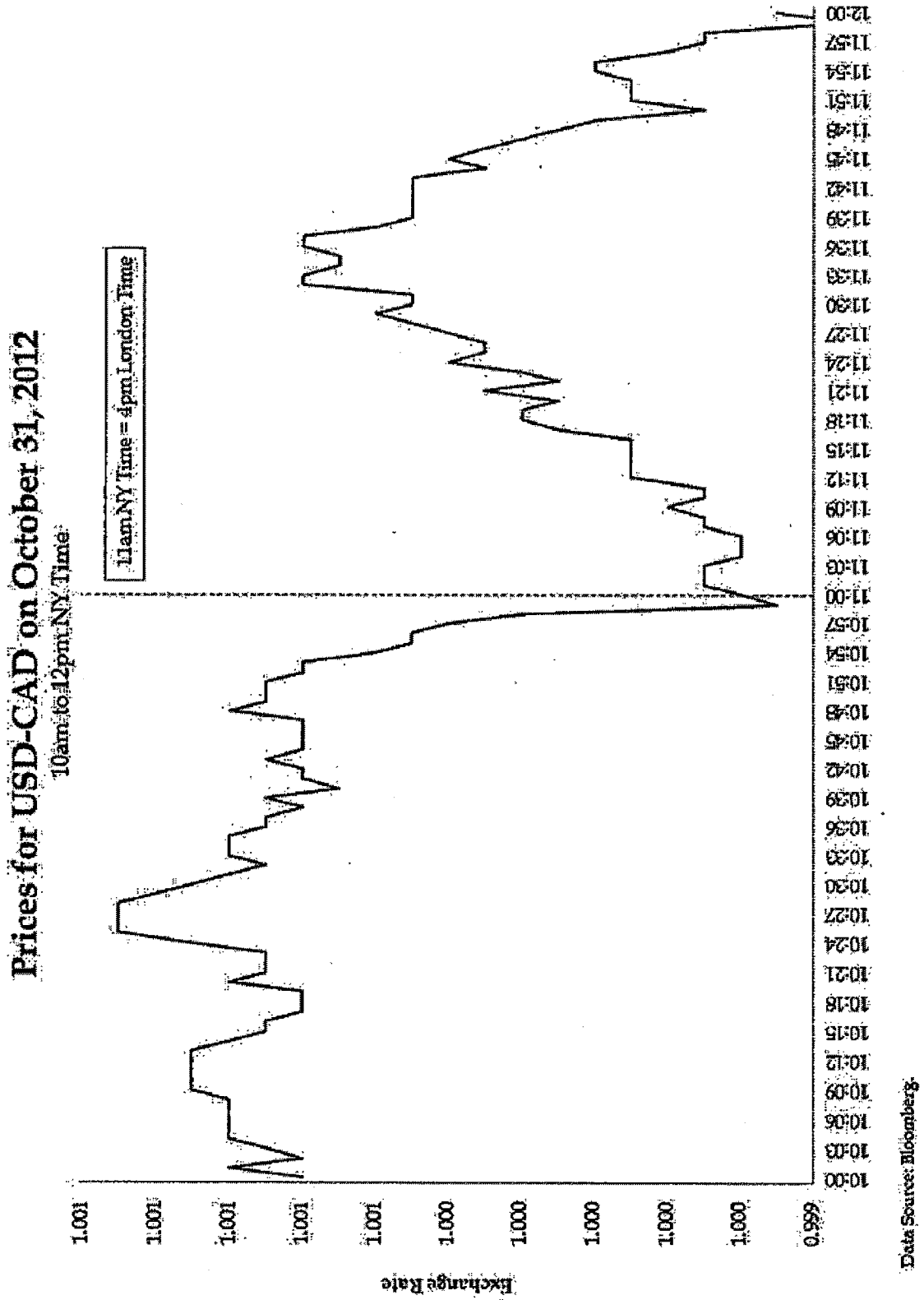


FIGURE 68

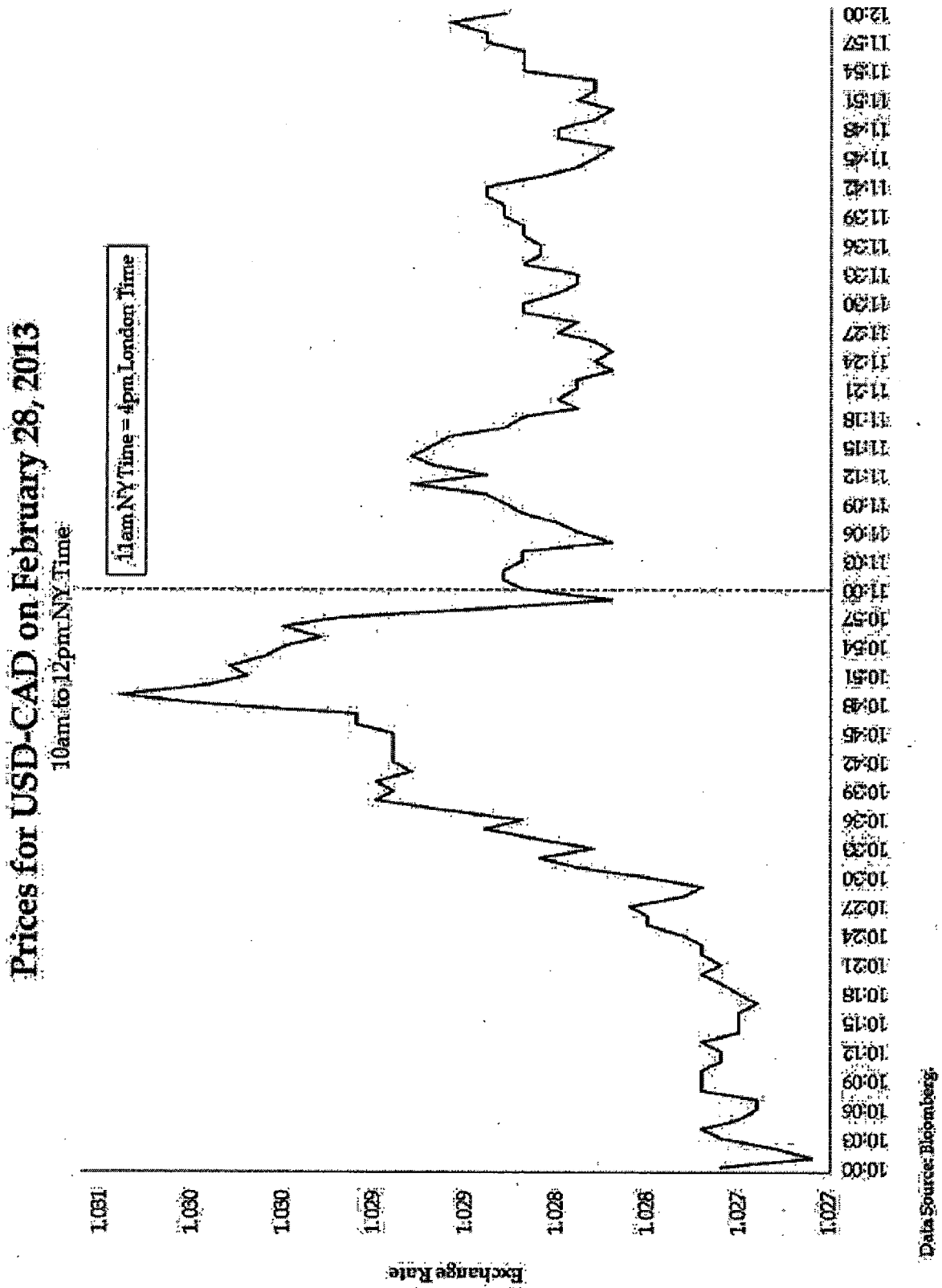


FIGURE 69

USD-CHE: Measure of Outlier Prices Compared to Preceding Prices Deviations of Prices in One Minute Intervals from 8:45am to 1:15pm NY Time with Respect to Nearby Prices

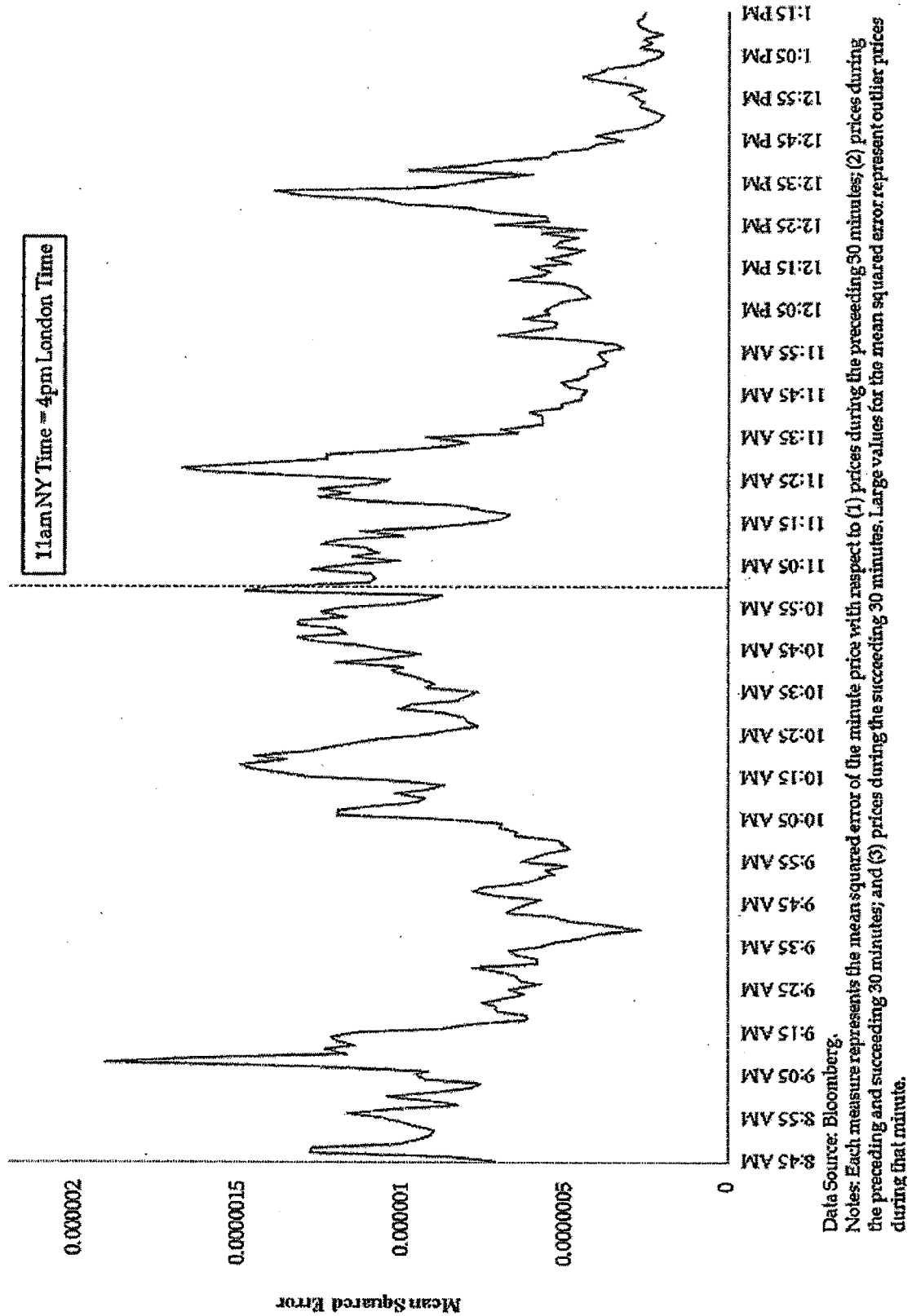


FIGURE 70

USD-CHF: Measure of Outlier Prices Compared to Preceding and Succeeding Prices
 Deviations of Prices in One Minute Intervals from 8:45am to 1:15pm NY Time with Respect to Nearby Prices

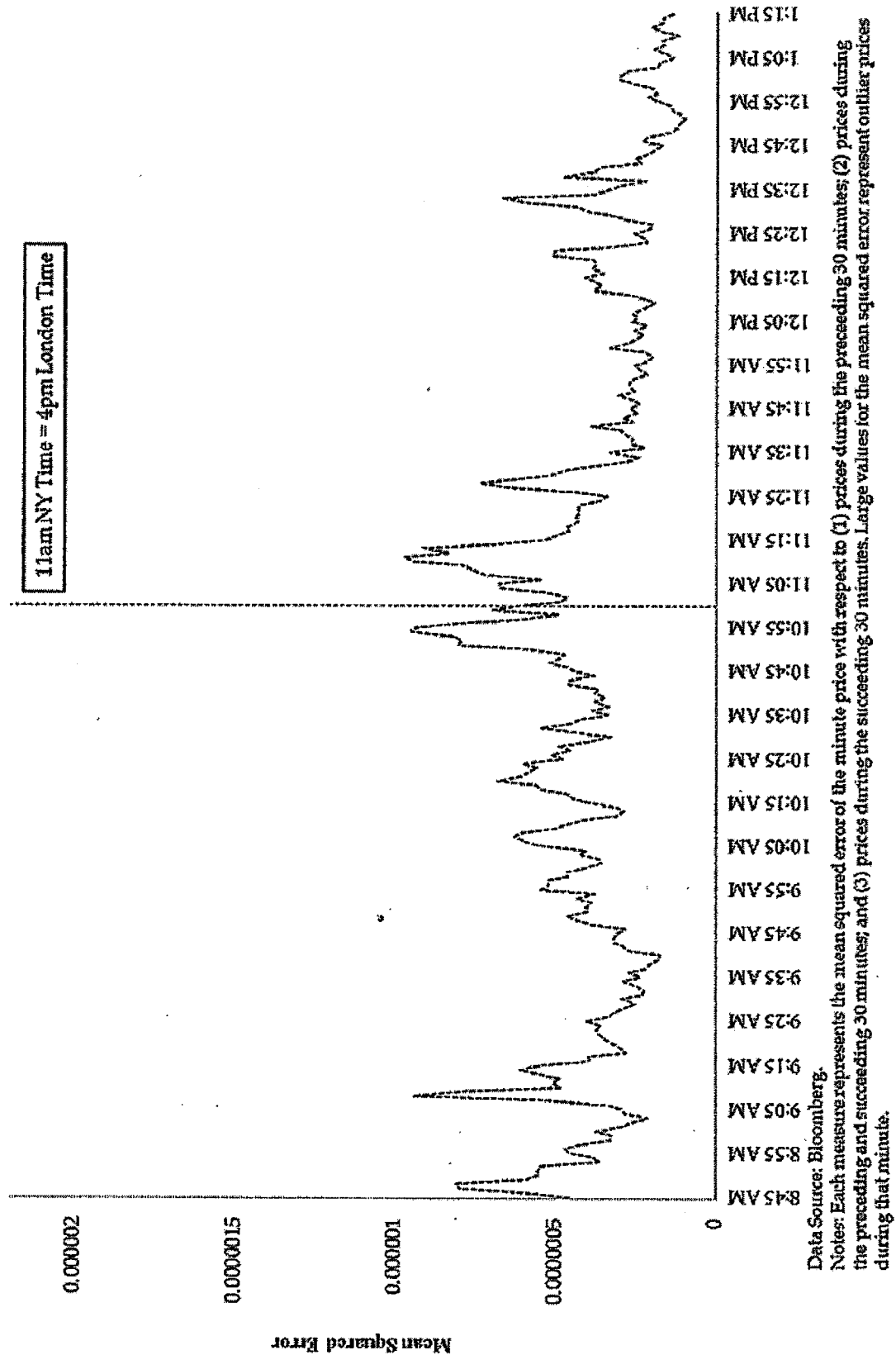


FIGURE 71

USD-CHF: Measure of Outlier Prices Compared to Succeeding Prices
 Deviations of Prices in One Minute Intervals from 8:45am to 1:15pm NY Time with Respect to Nearby Prices

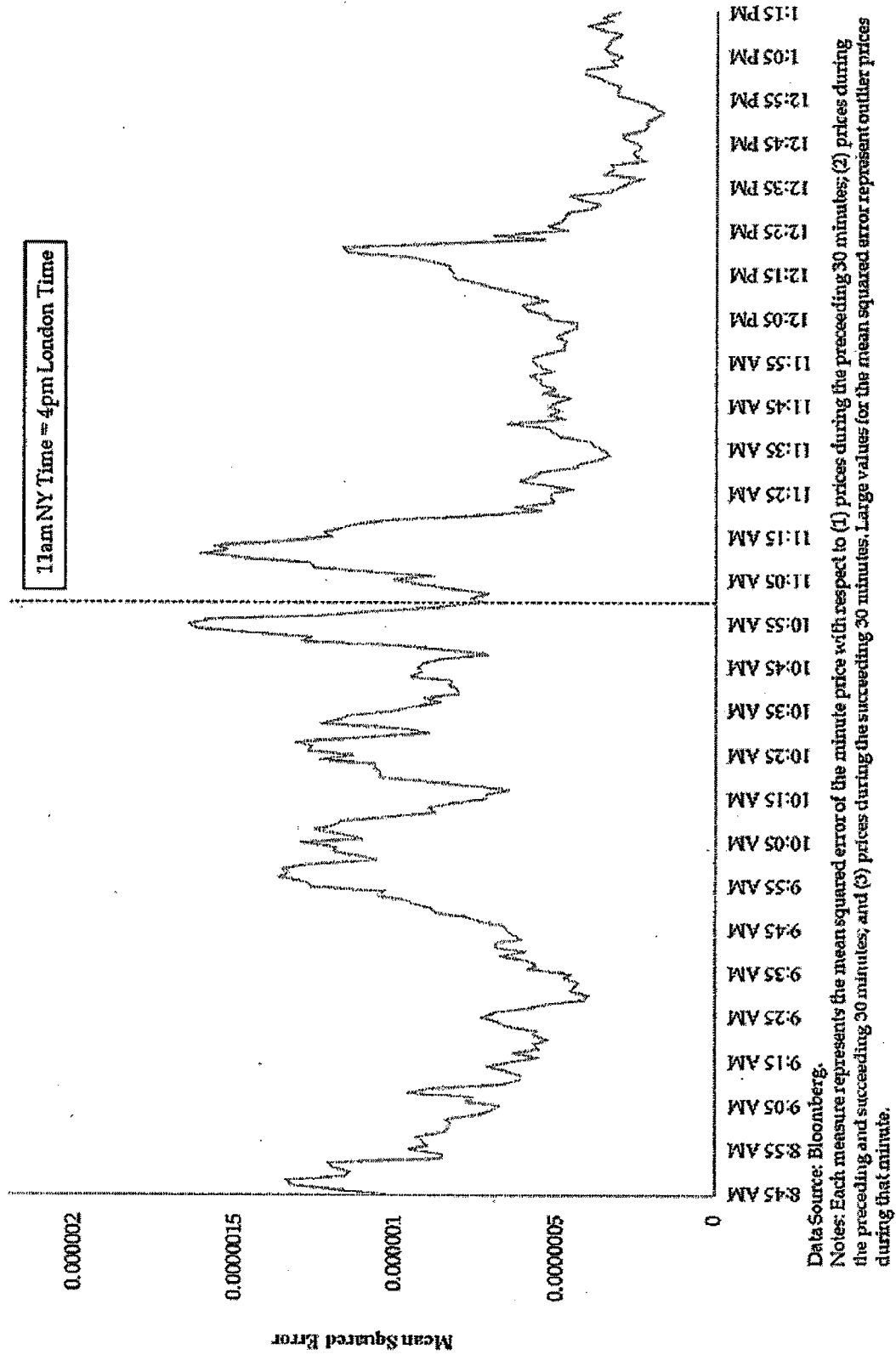


FIGURE 72

USD-CHF: Summary of Outliers				
Last Trading Day of Each Month (Jan 2009 - October 2013)				
		+/- 10 Minutes from 11am NY (4pm London)	+/- 20 Minutes from 11am NY (4pm London)	+/- 30 Minutes from 11am NY (4pm London)
Full Period	Total Number of Days	54	54	54
	Non-Outlier Days	39	34	31
	Number of Outlier Days Comparing Price to Preceding Prices	6	6	5
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	7	7	5
	Number of Outlier Days Comparing Price to Succeeding	2	7	13
	Total Number of Outlier Days	15	20	23
	Number of Outlier Days as a Portion of All Days	27.8%	37.0%	42.6%
2009	Total Number of Days	12	12	12
	Non-Outlier Days	9	7	6
	Number of Outlier Days Comparing Price to Preceding Prices	0	1	0
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	2	3	1
	Number of Outlier Days Comparing Price to Succeeding	1	1	5
	Total Number of Outlier Days	3	5	6
	Number of Outlier Days as a Portion of All Days	25.0%	41.7%	50.0%
2010	Total Number of Days	11	11	11
	Non-Outlier Days	6	5	4
	Number of Outlier Days Comparing Price to Preceding Prices	2	1	1
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	2	1	2
	Number of Outlier Days Comparing Price to Succeeding	1	4	4
	Total Number of Outlier Days	5	6	7
	Number of Outlier Days as a Portion of All Days	45.5%	54.5%	63.6%
2011	Total Number of Days	11	11	11
	Non-Outlier Days	7	6	6
	Number of Outlier Days Comparing Price to Preceding Prices	2	3	2
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	2	1	1
	Number of Outlier Days Comparing Price to Succeeding	0	1	2
	Total Number of Outlier Days	4	5	5
	Number of Outlier Days as a Portion of All Days	36.4%	45.5%	45.5%
2012	Total Number of Days	11	11	11
	Non-Outlier Days	9	8	7
	Number of Outlier Days Comparing Price to Preceding Prices	1	1	2
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	1	2	1
	Number of Outlier Days Comparing Price to Succeeding	0	0	1
	Total Number of Outlier Days	2	3	4
	Number of Outlier Days as a Portion of All Days	18.2%	27.3%	36.4%
2013	Total Number of Days	9	9	9
	Non-Outlier Days	8	8	8
	Number of Outlier Days Comparing Price to Preceding Prices	1	0	0
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	0	0	0
	Number of Outlier Days Comparing Price to Succeeding	0	1	1
	Total Number of Outlier Days	1	1	1
	Number of Outlier Days as a Portion of All Days	11.1%	11.1%	11.1%
Data Source: Bloomberg				
Note: Interval of time is defined around 11 a.m. NY time / 4 p.m. London time.				

FIGURE 73

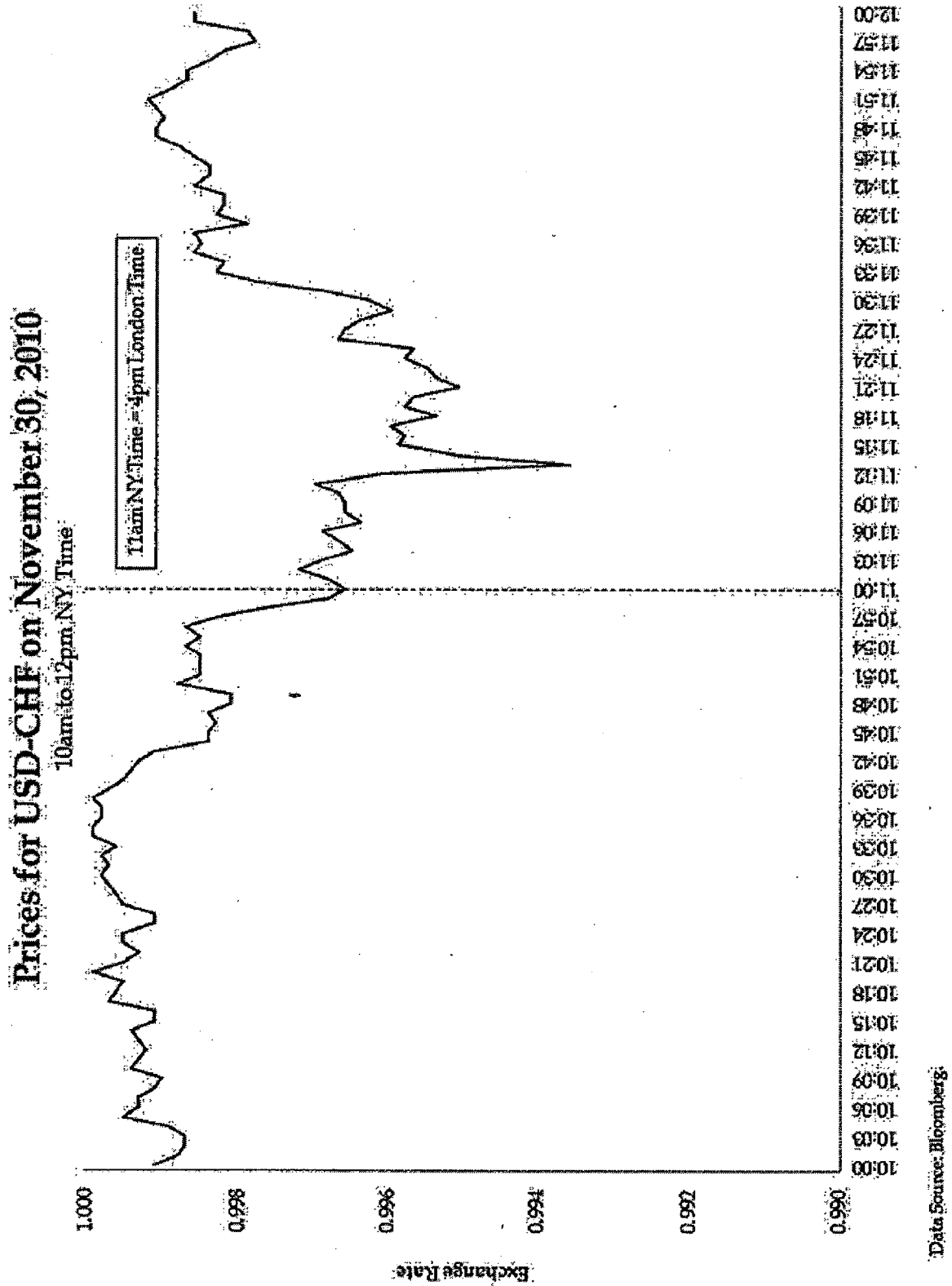


FIGURE 74

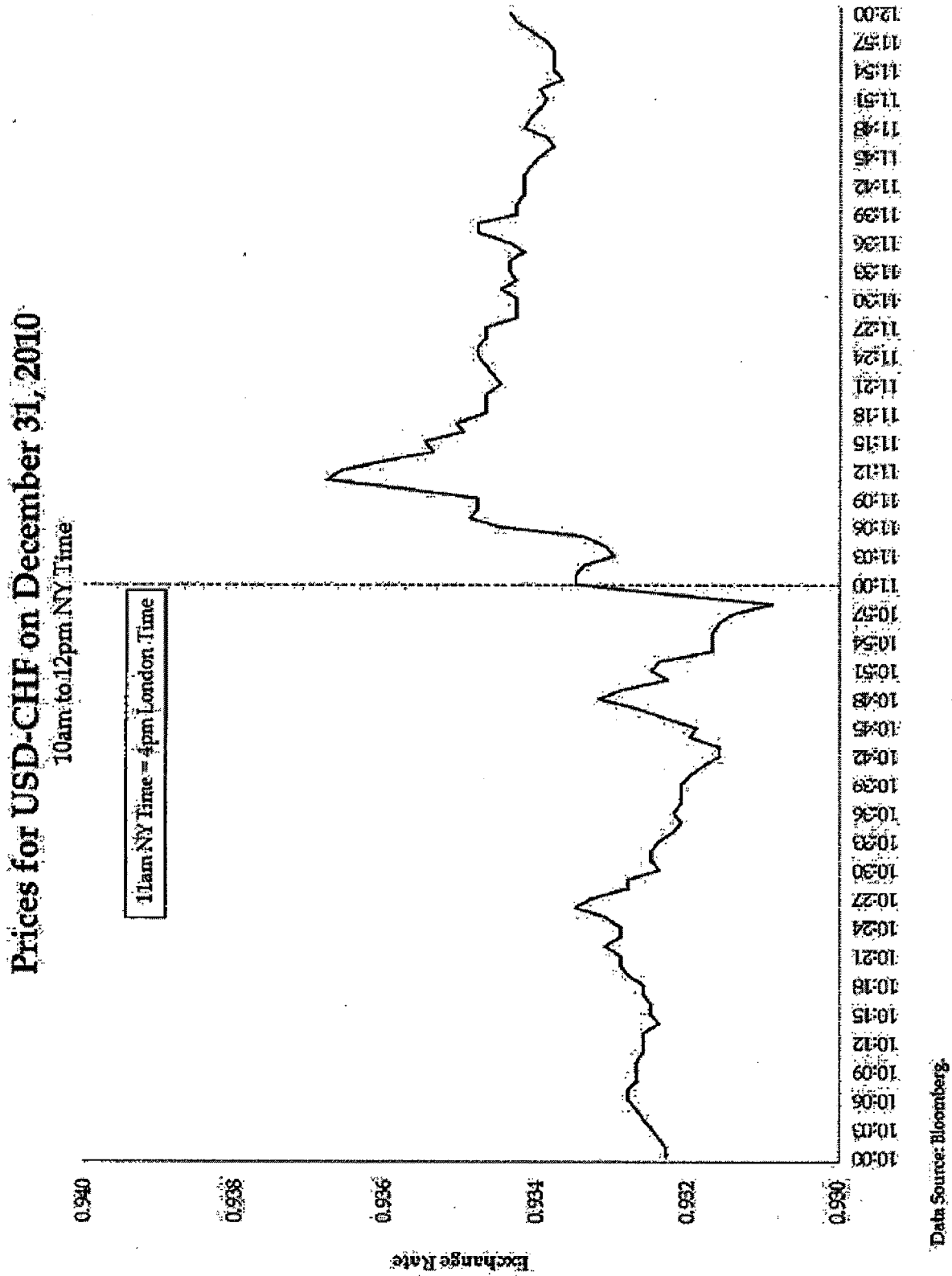


FIGURE 75

USD-DKK: Measure of Outlier Prices Compared to Preceding Prices

Deviations of Prices in One Minute Intervals from 8:45am to 1:15pm NY Time with Respect to Nearby Prices

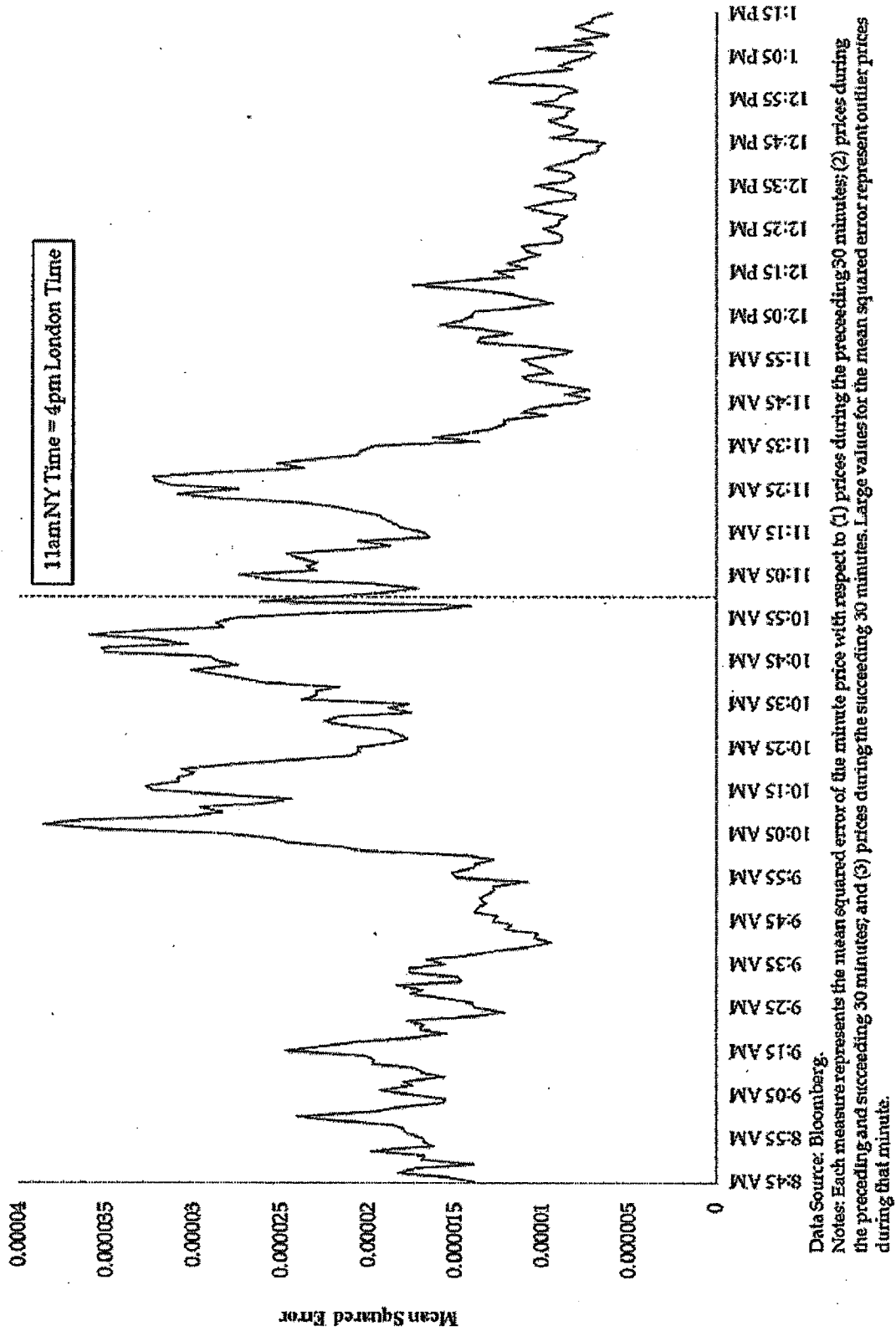


FIGURE 76

USD-DKK: Measure of Outlier Prices Compared to Preceding and Succeeding Prices

Deviations of Prices in One Minute Intervals from 8:45am to 1:15pm NY Time with Respect to Nearby Prices

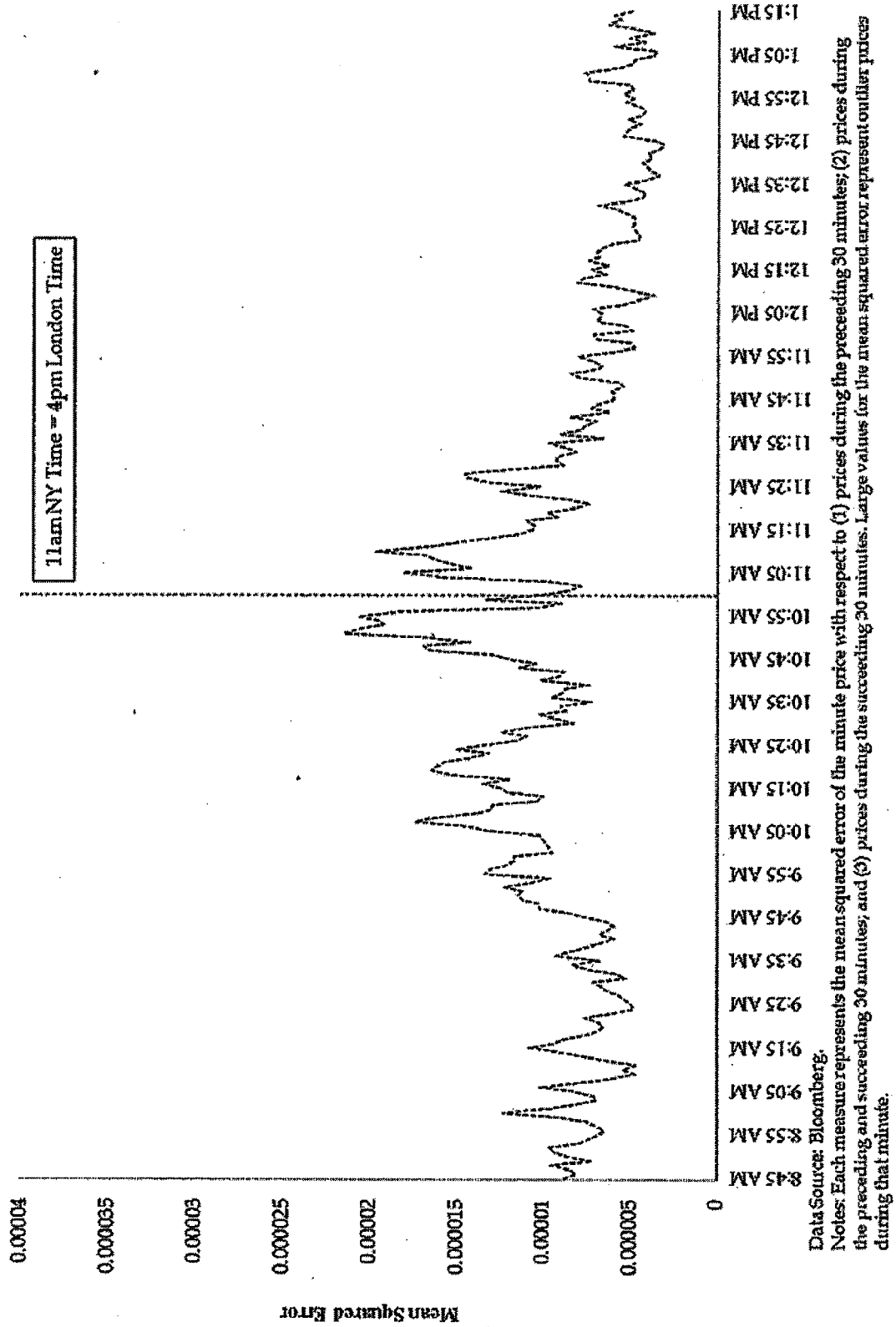


FIGURE 77

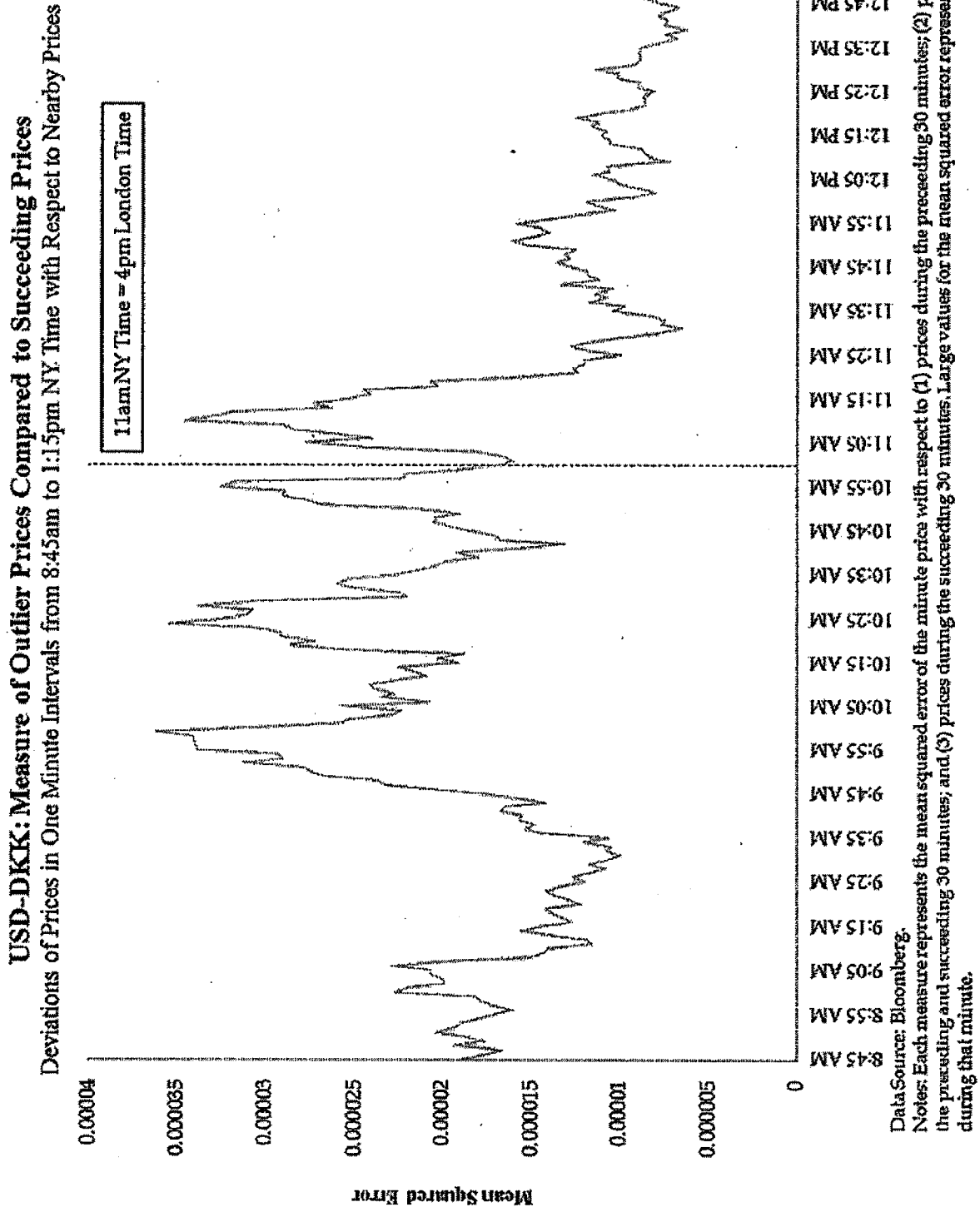


FIGURE 78

USD-DKK: Summary of Outliers				
Last Trading Day of Each Month (Jan 2009 - October 2013)				
		+/- 10 Minutes from 11am NY (4pm London)	+/- 20 Minutes from 11am NY (4pm London)	+/- 30 Minutes from 11am NY (4pm London)
Full Period	Total Number of Days	54	54	54
	Non-Outlier Days	37	32	27
	Number of Outlier Days Comparing Price to Preceding Prices	10	11	12
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	6	6	7
	Number of Outlier Days Comparing Price to Succeeding	1	5	8
	Total Number of Outlier Days	17	22	27
	Number of Outlier Days as a Portion of All Days	31.5%	40.7%	50.0%
2009	Total Number of Days	12	12	12
	Non-Outlier Days	5	4	3
	Number of Outlier Days Comparing Price to Preceding Prices	4	4	2
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	2	2	3
	Number of Outlier Days Comparing Price to Succeeding	1	2	4
	Total Number of Outlier Days	7	8	9
	Number of Outlier Days as a Portion of All Days	58.3%	66.7%	75.0%
2010	Total Number of Days	11	11	11
	Non-Outlier Days	6	6	3
	Number of Outlier Days Comparing Price to Preceding Prices	4	3	6
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	1	1	1
	Number of Outlier Days Comparing Price to Succeeding	0	1	1
	Total Number of Outlier Days	5	5	8
	Number of Outlier Days as a Portion of All Days	45.5%	45.5%	72.7%
2011	Total Number of Days	11	11	11
	Non-Outlier Days	10	8	8
	Number of Outlier Days Comparing Price to Preceding Prices	1	2	2
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	0	0	0
	Number of Outlier Days Comparing Price to Succeeding	0	1	1
	Total Number of Outlier Days	1	3	3
	Number of Outlier Days as a Portion of All Days	9.1%	27.3%	27.3%
2012	Total Number of Days	11	11	11
	Non-Outlier Days	9	8	7
	Number of Outlier Days Comparing Price to Preceding Prices	0	1	1
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	2	2	2
	Number of Outlier Days Comparing Price to Succeeding	0	0	1
	Total Number of Outlier Days	2	3	4
	Number of Outlier Days as a Portion of All Days	18.2%	27.3%	36.4%
2013	Total Number of Days	9	9	9
	Non-Outlier Days	7	6	6
	Number of Outlier Days Comparing Price to Preceding Prices	1	1	1
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	1	1	1
	Number of Outlier Days Comparing Price to Succeeding	0	1	1
	Total Number of Outlier Days	2	3	3
	Number of Outlier Days as a Portion of All Days	22.2%	33.3%	33.3%
Data Source: Bloomberg.				
Note: Interval of time is defined around 11 a.m. NY time / 4 p.m. London time.				

FIGURE 79

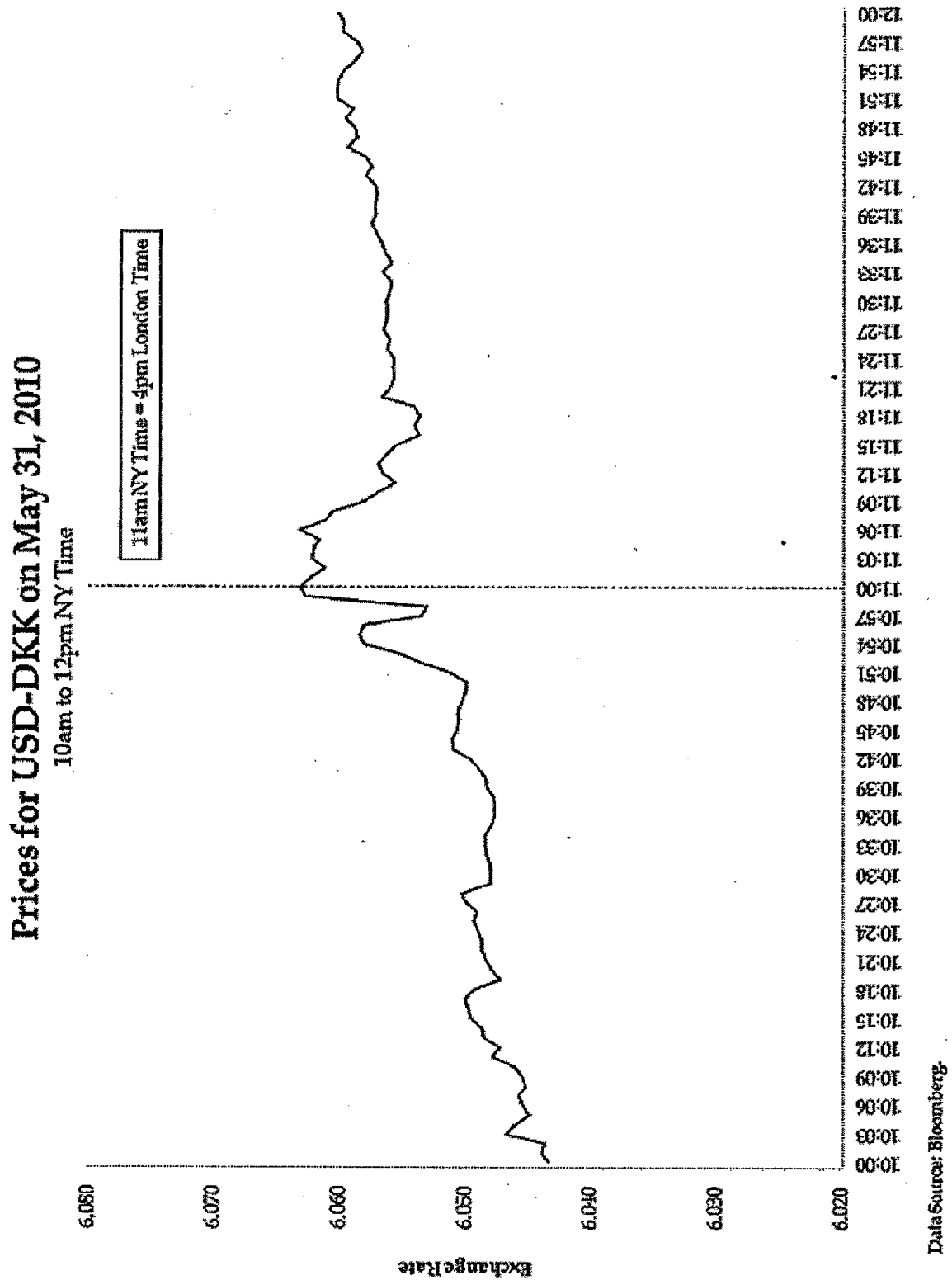


FIGURE 80

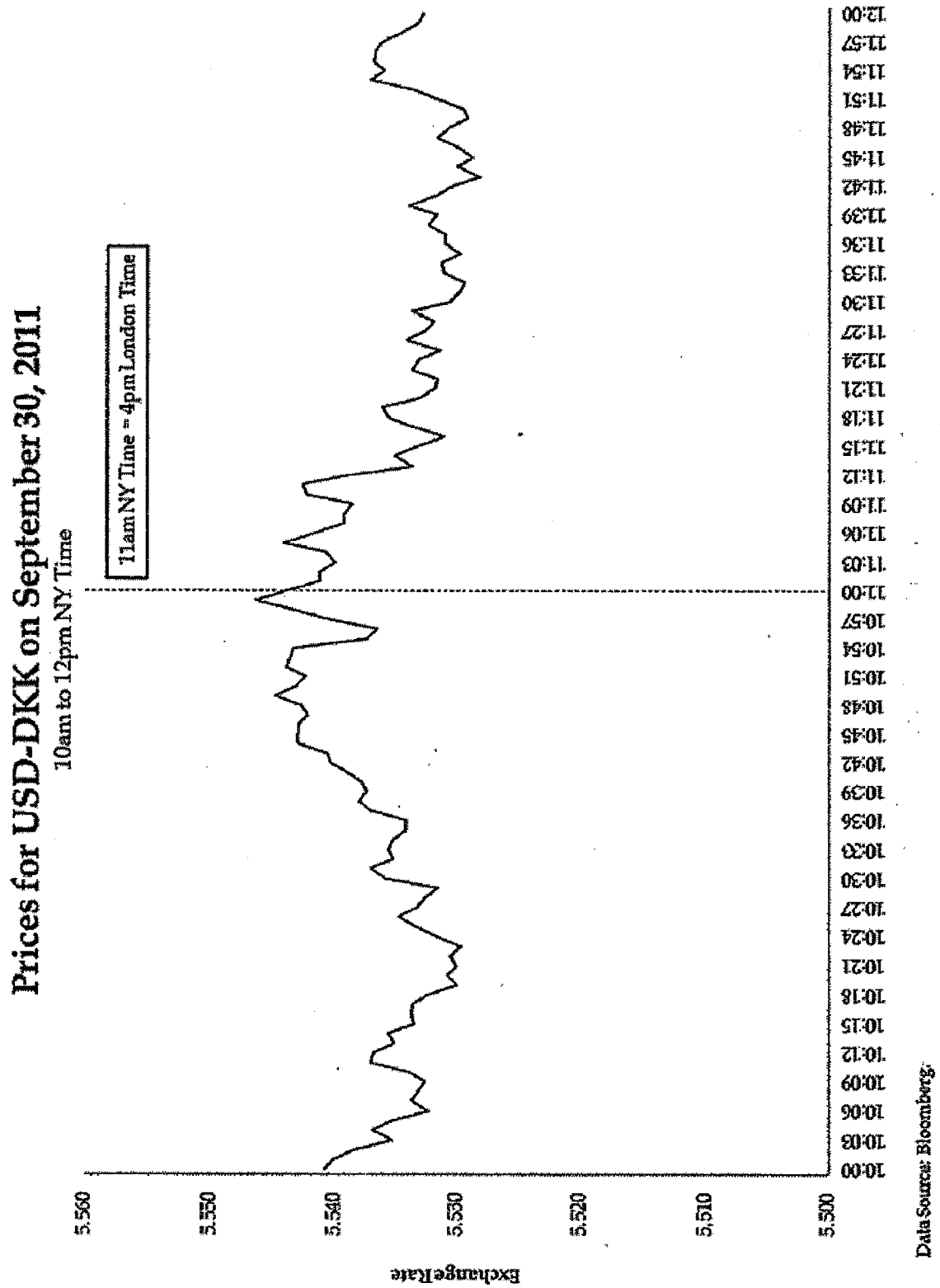


FIGURE 81

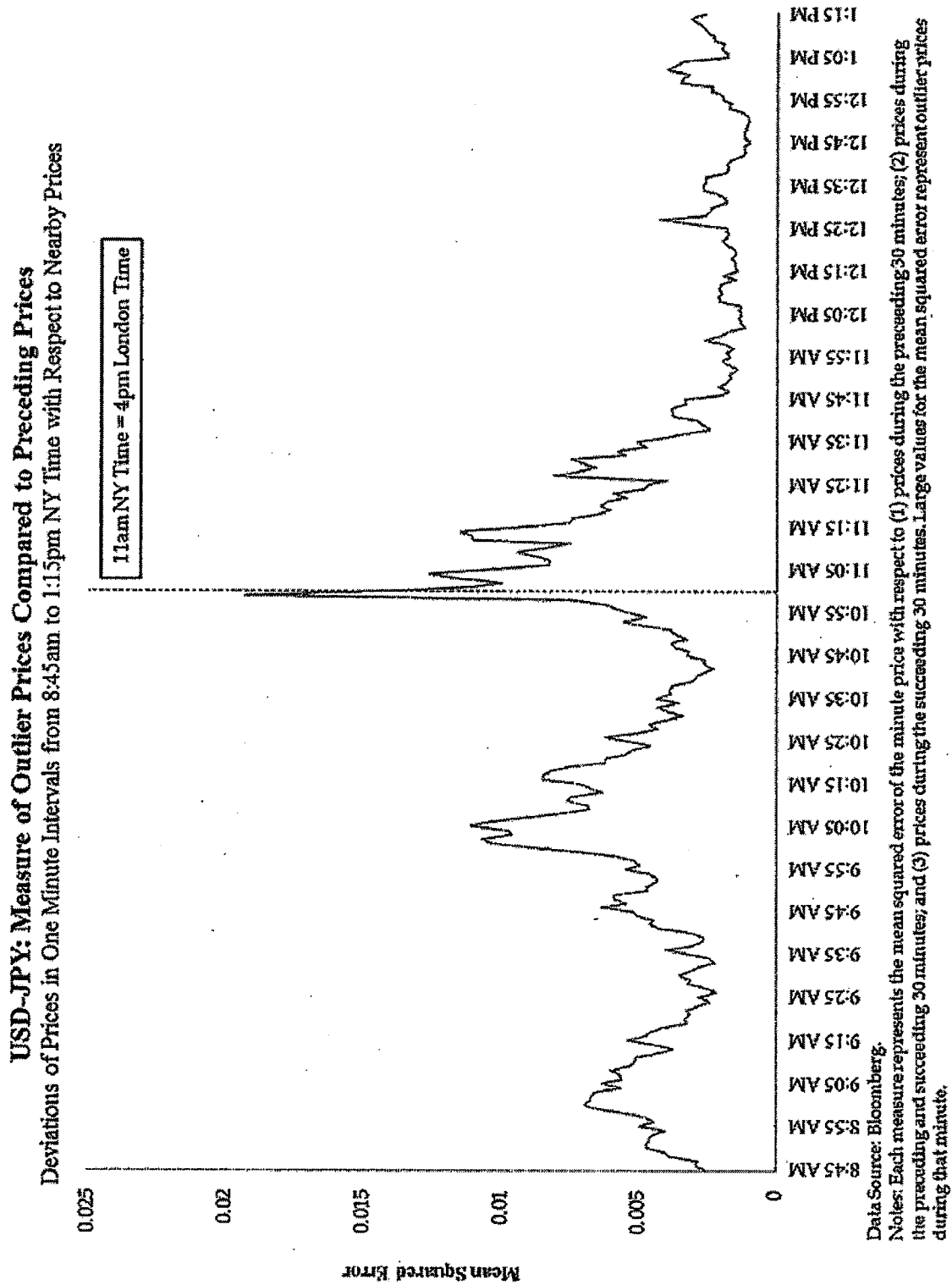


FIGURE 82

USD-JPY: Measure of Outlier Prices Compared to Preceding and Succeeding Prices
 Deviations of Prices in One Minute Intervals from 8:45am to 1:15pm NY Time with Respect to Nearby Prices

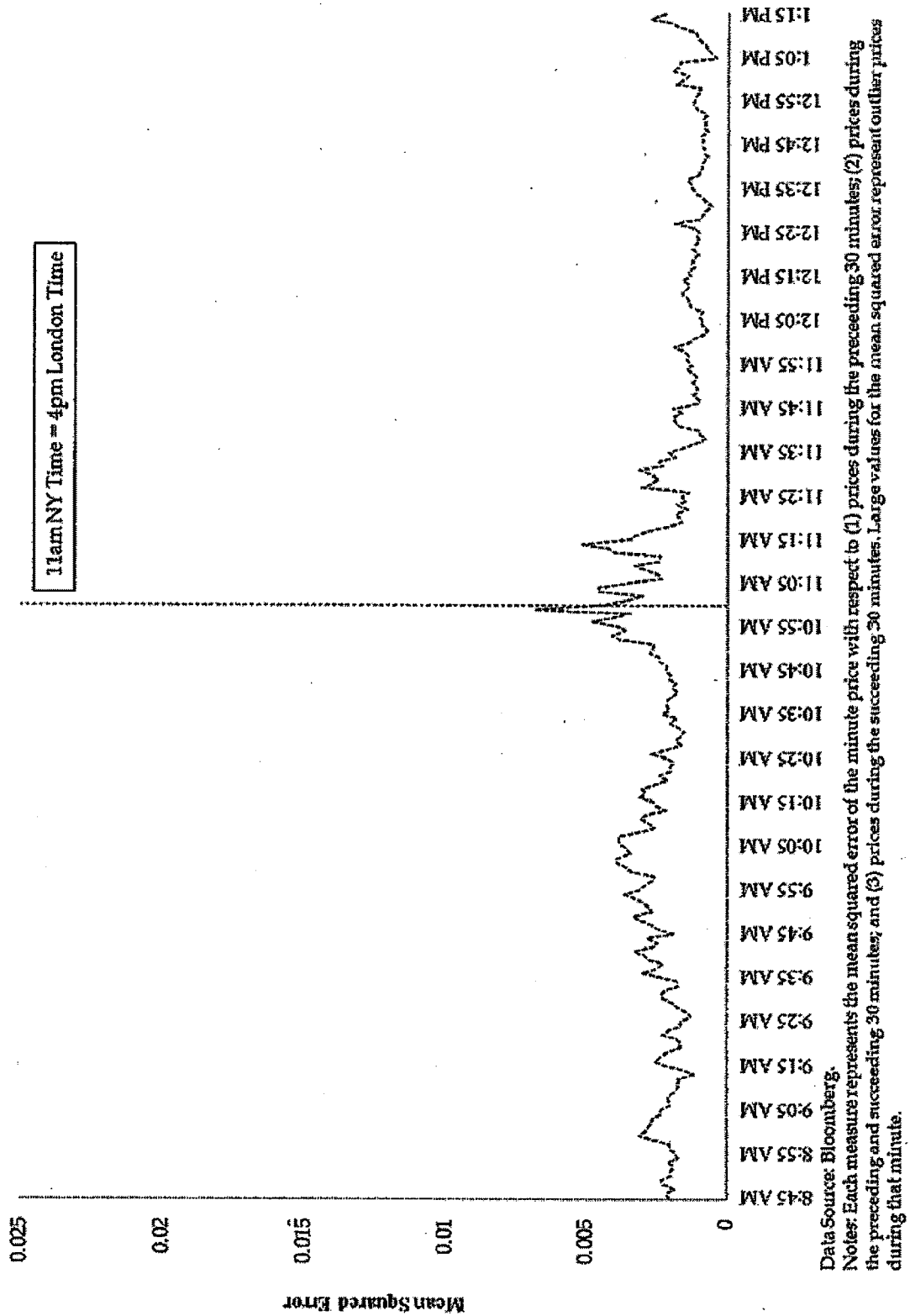


FIGURE 83

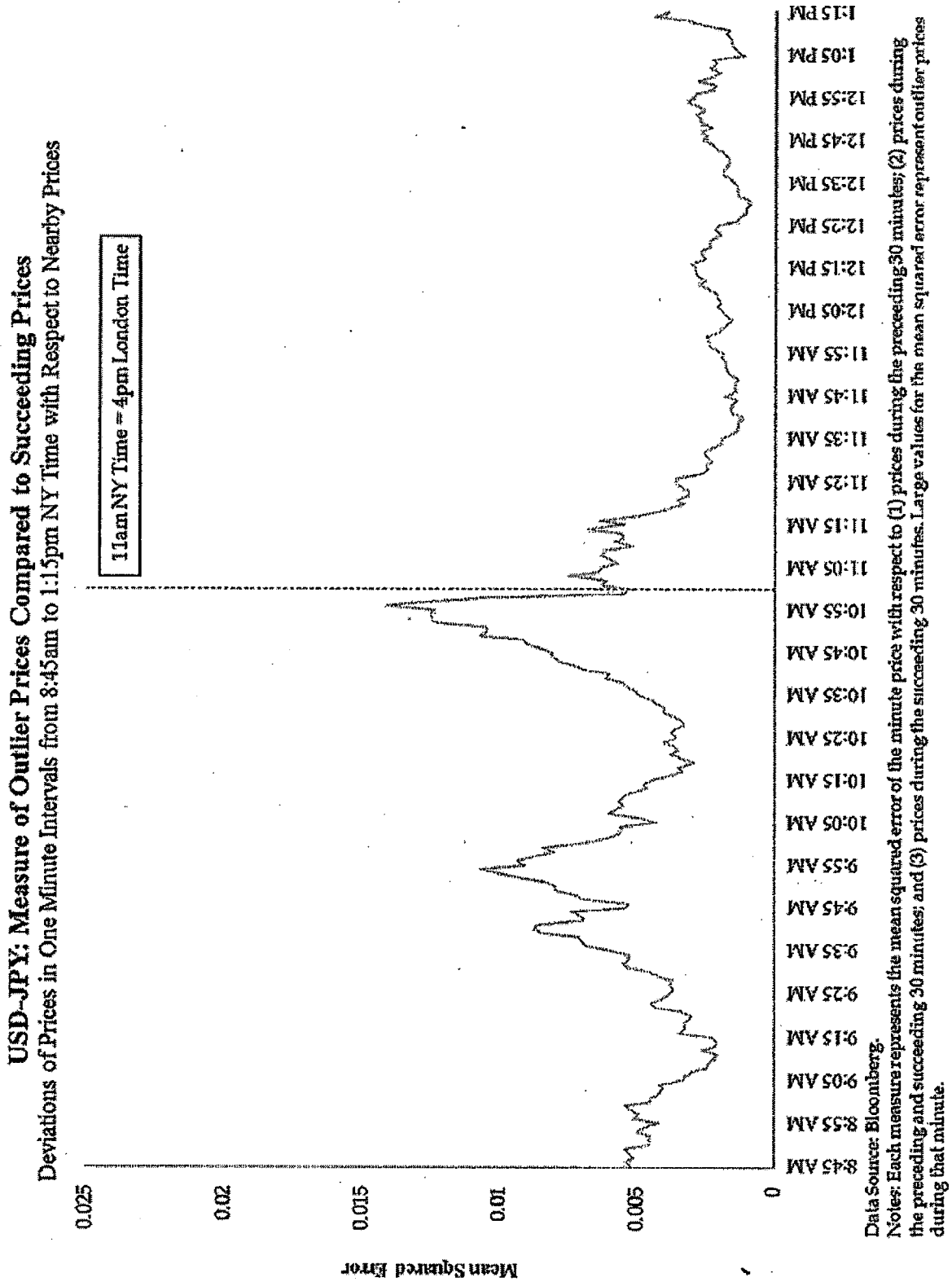


FIGURE 84

USD-JPY: Summary of Outliers				
Last Trading Day of Each Month (Jan 2009 - October 2013)				
		+/- 10 Minutes from 11am NY (4pm London)	+/- 20 Minutes from 11am NY (4pm London)	+/- 30 Minutes from 11am NY (4pm London)
Full Period	Total Number of Days	55	55	55
	Non-Outlier Days	43	42	42
	Number of Outlier Days Comparing Price to Preceding Prices	5	5	4
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	3	3	2
	Number of Outlier Days Comparing Price to Succeeding	4	5	7
	Total Number of Outlier Days	12	13	13
	Number of Outlier Days as a Portion of All Days	21.8%	23.6%	23.6%
2009	Total Number of Days	12	12	12
	Non-Outlier Days	9	8	7
	Number of Outlier Days Comparing Price to Preceding Prices	3	3	2
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	0	0	0
	Number of Outlier Days Comparing Price to Succeeding	0	1	3
	Total Number of Outlier Days	3	4	5
	Number of Outlier Days as a Portion of All Days	25.0%	33.3%	41.7%
2010	Total Number of Days	11	11	11
	Non-Outlier Days	5	4	4
	Number of Outlier Days Comparing Price to Preceding Prices	1	1	1
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	0	0	0
	Number of Outlier Days Comparing Price to Succeeding	5	6	6
	Total Number of Outlier Days	6	7	7
	Number of Outlier Days as a Portion of All Days	54.5%	63.6%	63.6%
2011	Total Number of Days	11	11	11
	Non-Outlier Days	5	5	5
	Number of Outlier Days Comparing Price to Preceding Prices	2	1	1
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	4	3	2
	Number of Outlier Days Comparing Price to Succeeding	0	2	3
	Total Number of Outlier Days	6	6	6
	Number of Outlier Days as a Portion of All Days	54.5%	54.5%	54.5%
2012	Total Number of Days	11	11	11
	Non-Outlier Days	8	7	7
	Number of Outlier Days Comparing Price to Preceding Prices	1	1	0
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	1	2	2
	Number of Outlier Days Comparing Price to Succeeding	1	1	2
	Total Number of Outlier Days	3	4	4
	Number of Outlier Days as a Portion of All Days	27.3%	36.4%	36.4%
2013	Total Number of Days	9	9	9
	Non-Outlier Days	8	8	8
	Number of Outlier Days Comparing Price to Preceding Prices	1	1	1
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	0	0	0
	Number of Outlier Days Comparing Price to Succeeding	0	0	0
	Total Number of Outlier Days	1	1	1
	Number of Outlier Days as a Portion of All Days	11.1%	11.1%	11.1%
Data Source: Bloomberg.				
Note: Interval of time is defined around 11 a.m. NY time / 4 p.m. London time.				

FIGURE 85

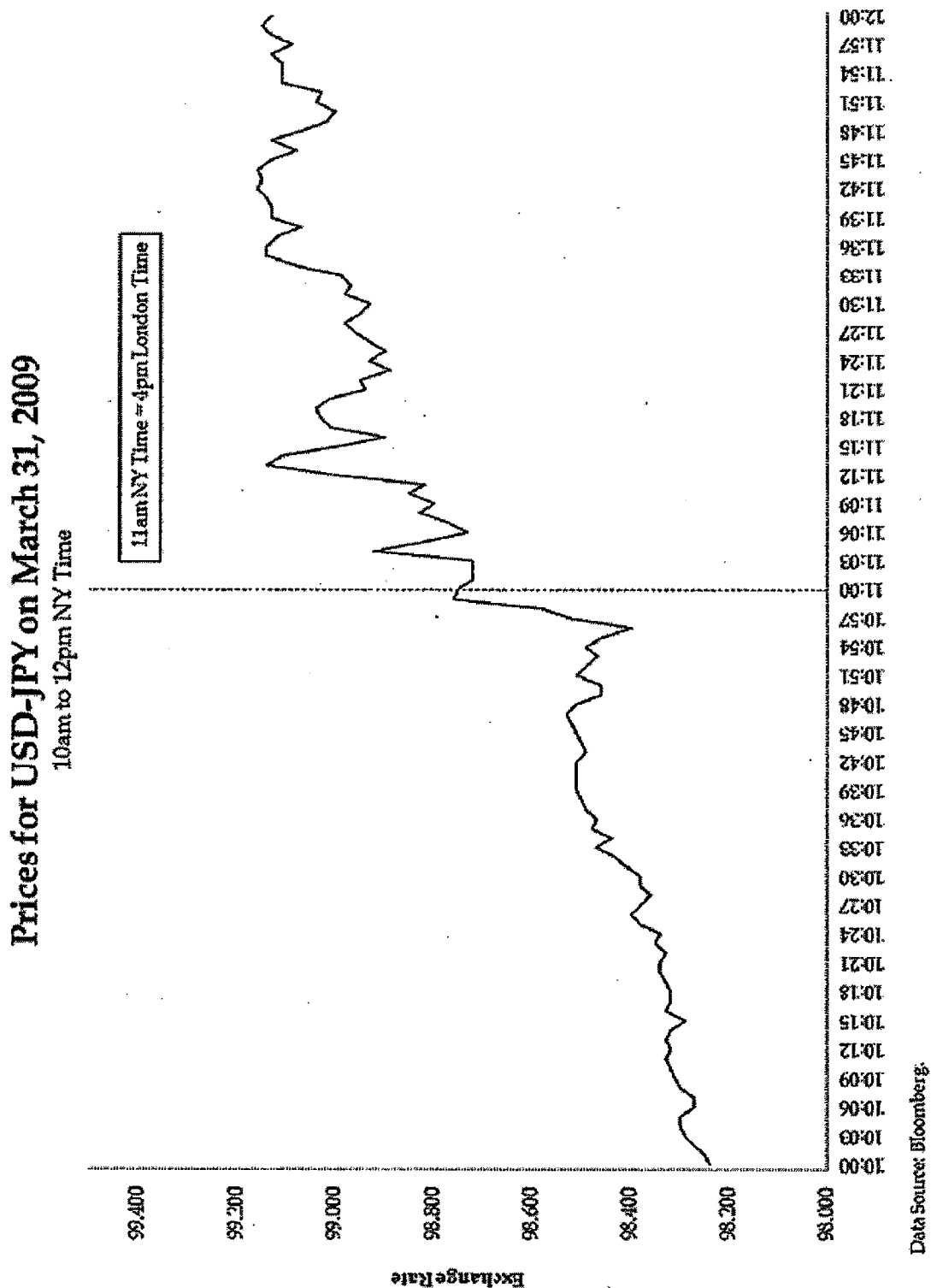
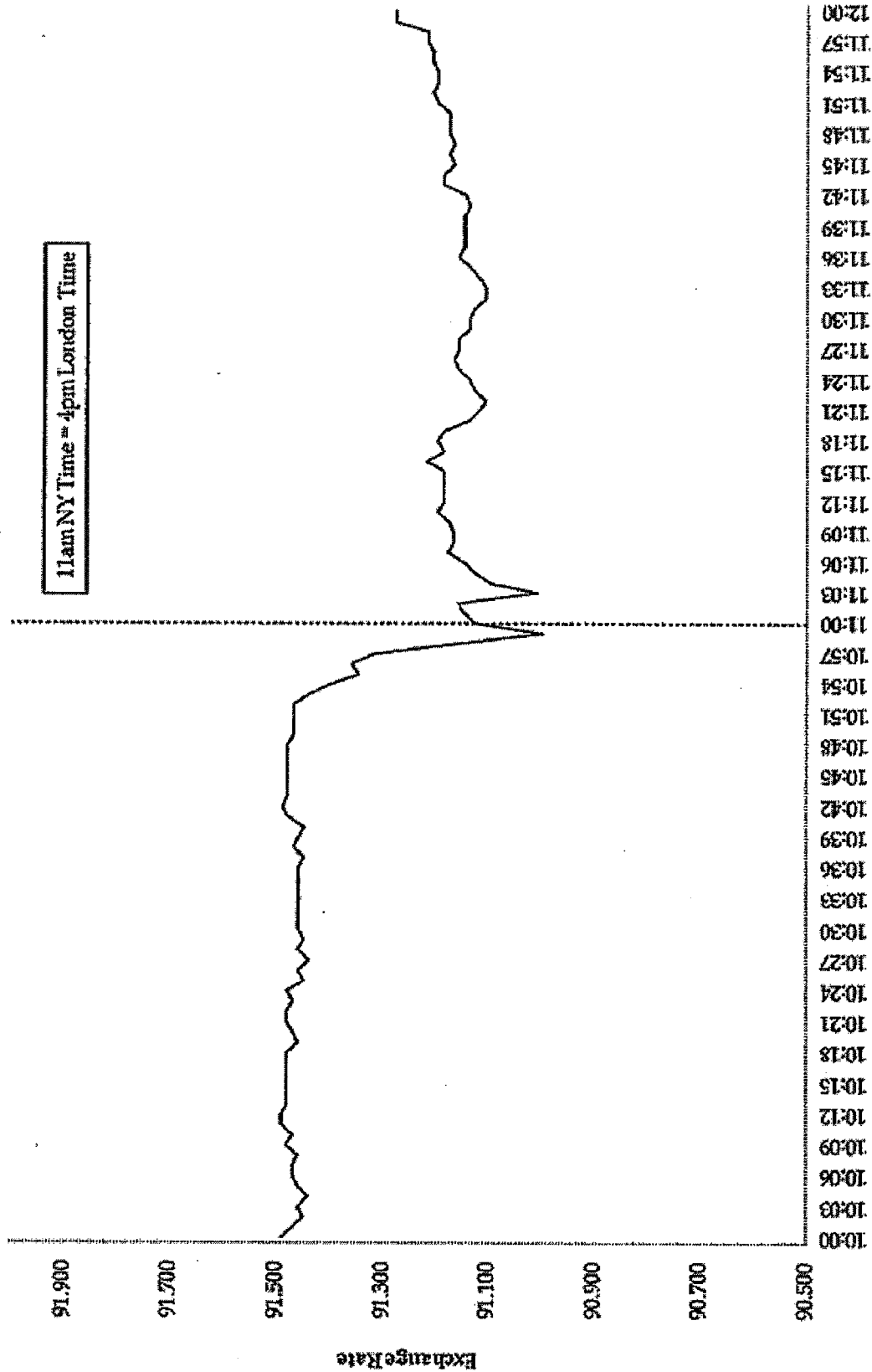


FIGURE 86

Prices for USD-JPY on May 31, 2010

10am to 12pm NY Time

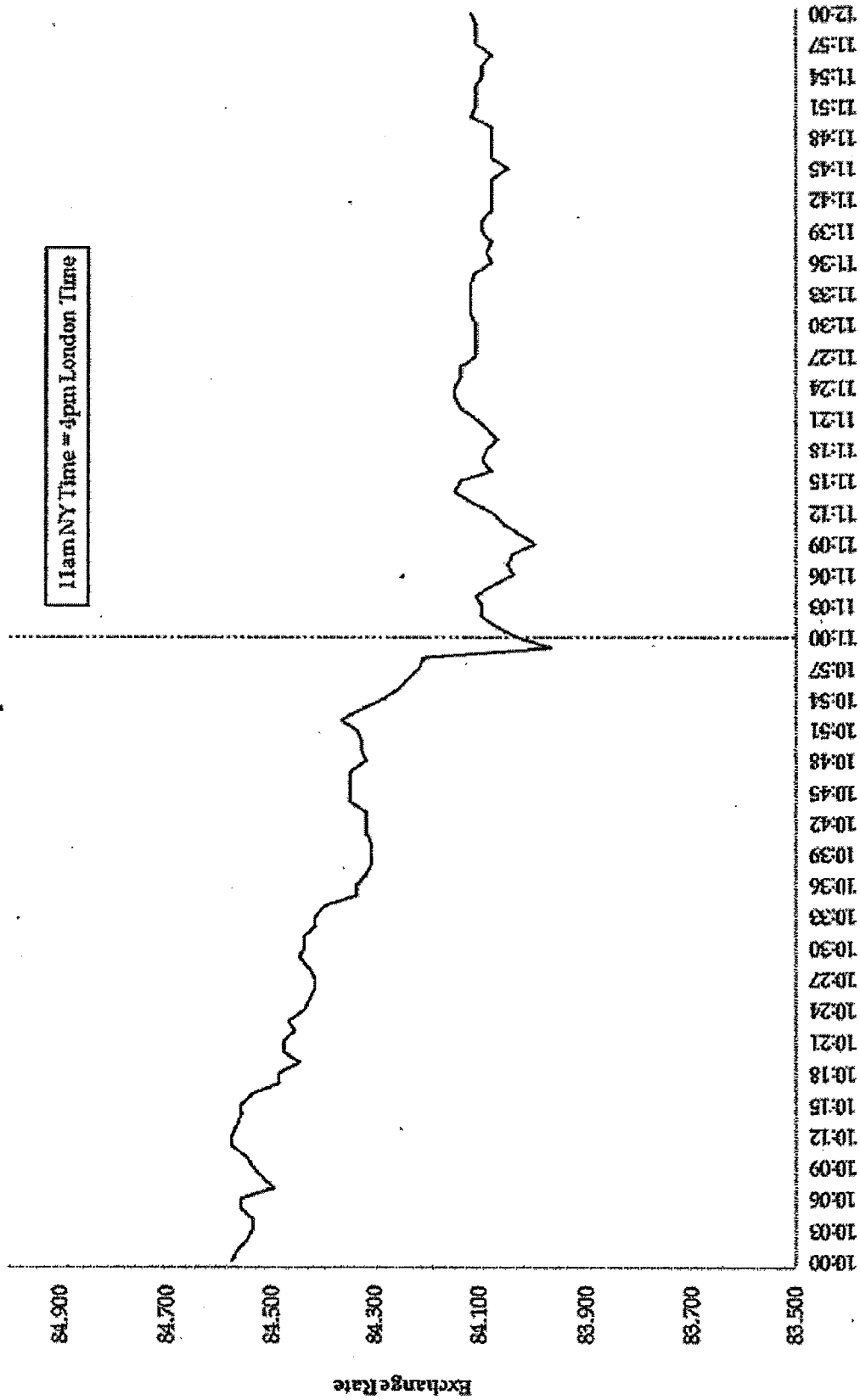


Data Source: Bloomberg.

FIGURE 87

Prices for USD-JPY on August 31, 2010

10am to 12pm NY Time



11am NY Time = 4pm London Time

Data Source: Bloomberg.

FIGURE 88

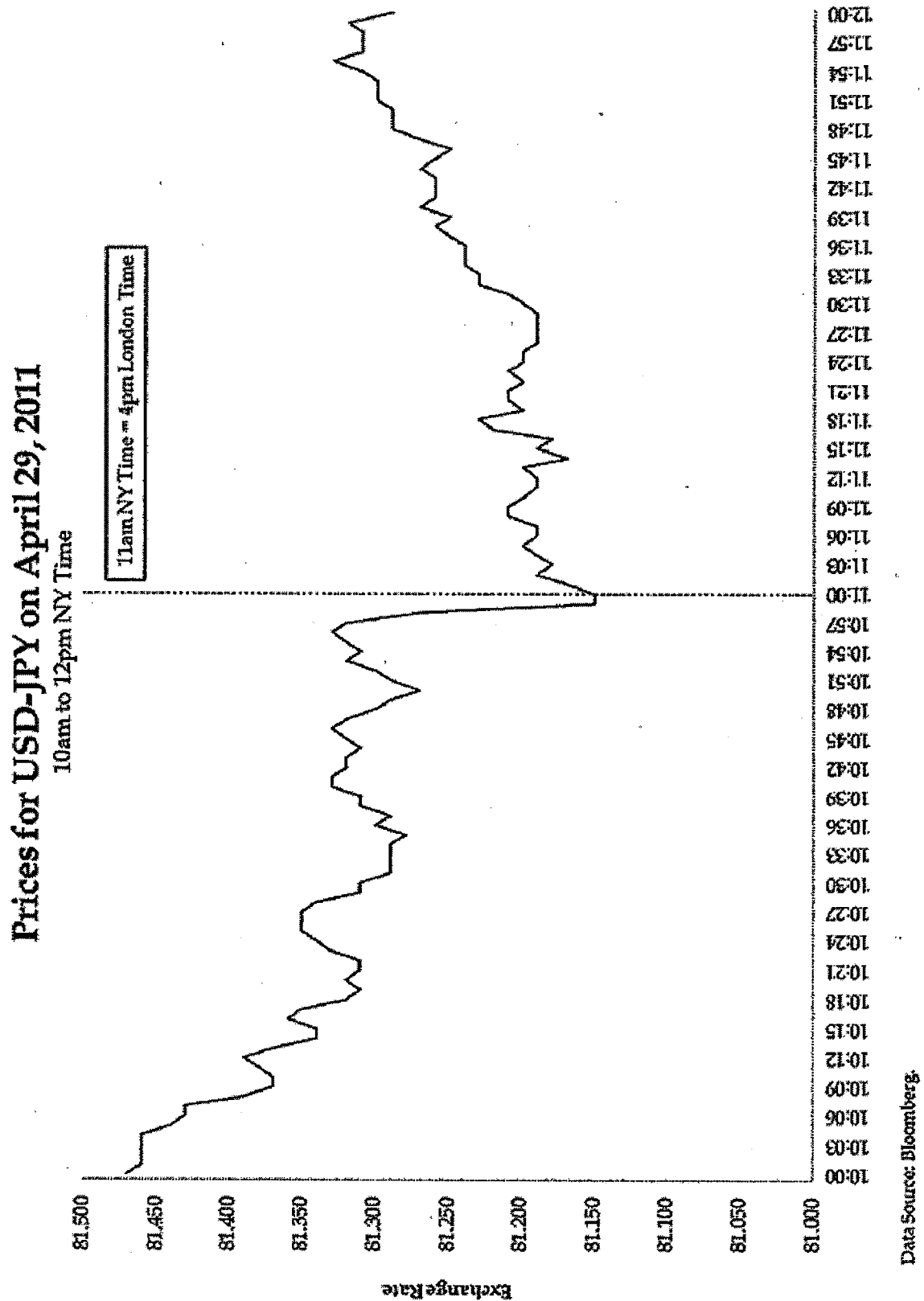


FIGURE 89

USD-NOK: Measure of Outlier Prices Compared to Preceding Prices Deviations of Prices in One Minute Intervals from 8:45am to 1:15pm NY Time with Respect to Nearby Prices

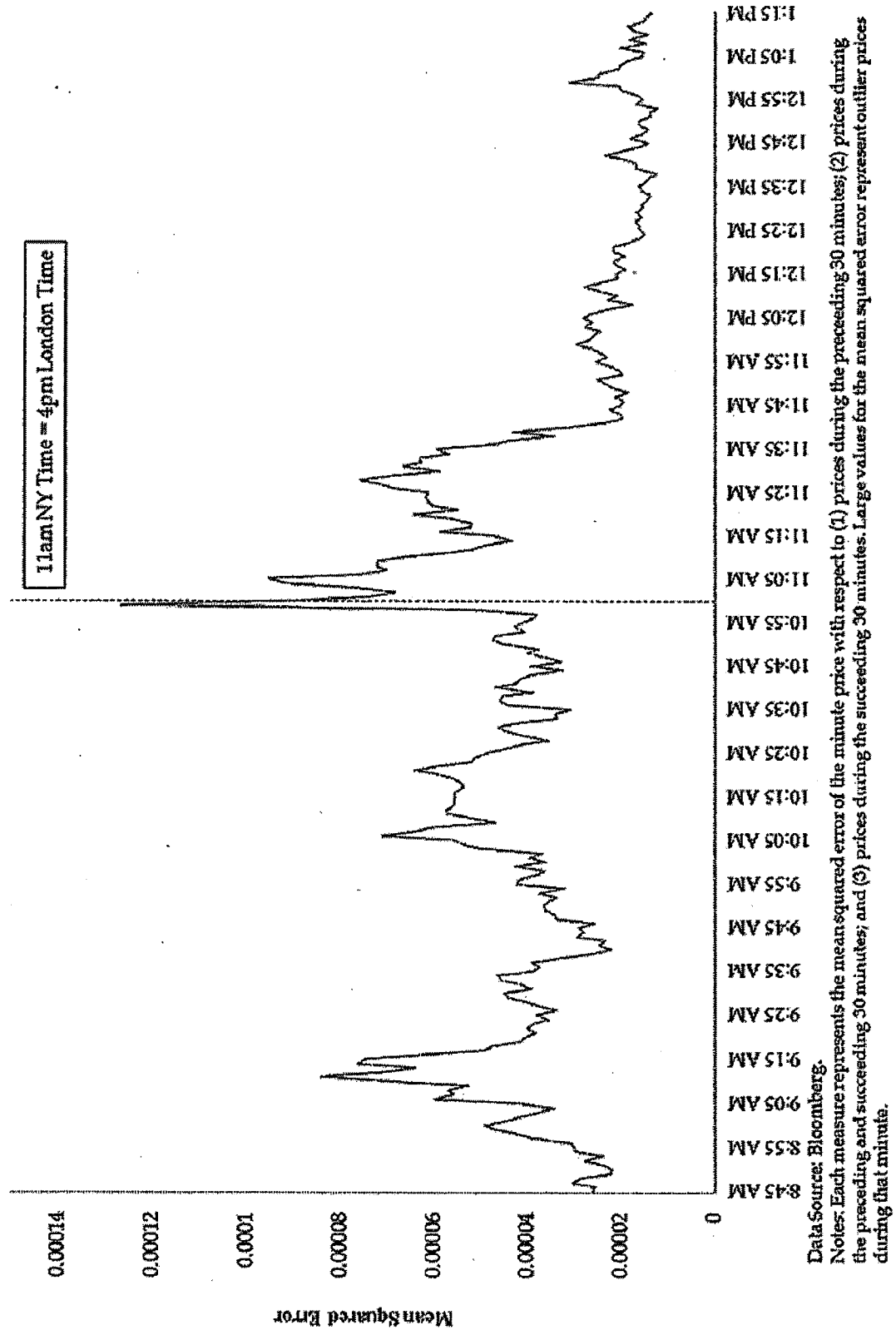


FIGURE 90

USD-NOK: Measure of Outlier Prices Compared to Preceding and Succeeding Prices

Deviations of Prices in One Minute Intervals from 8:45am to 1:15pm NY Time with Respect to Nearby Prices

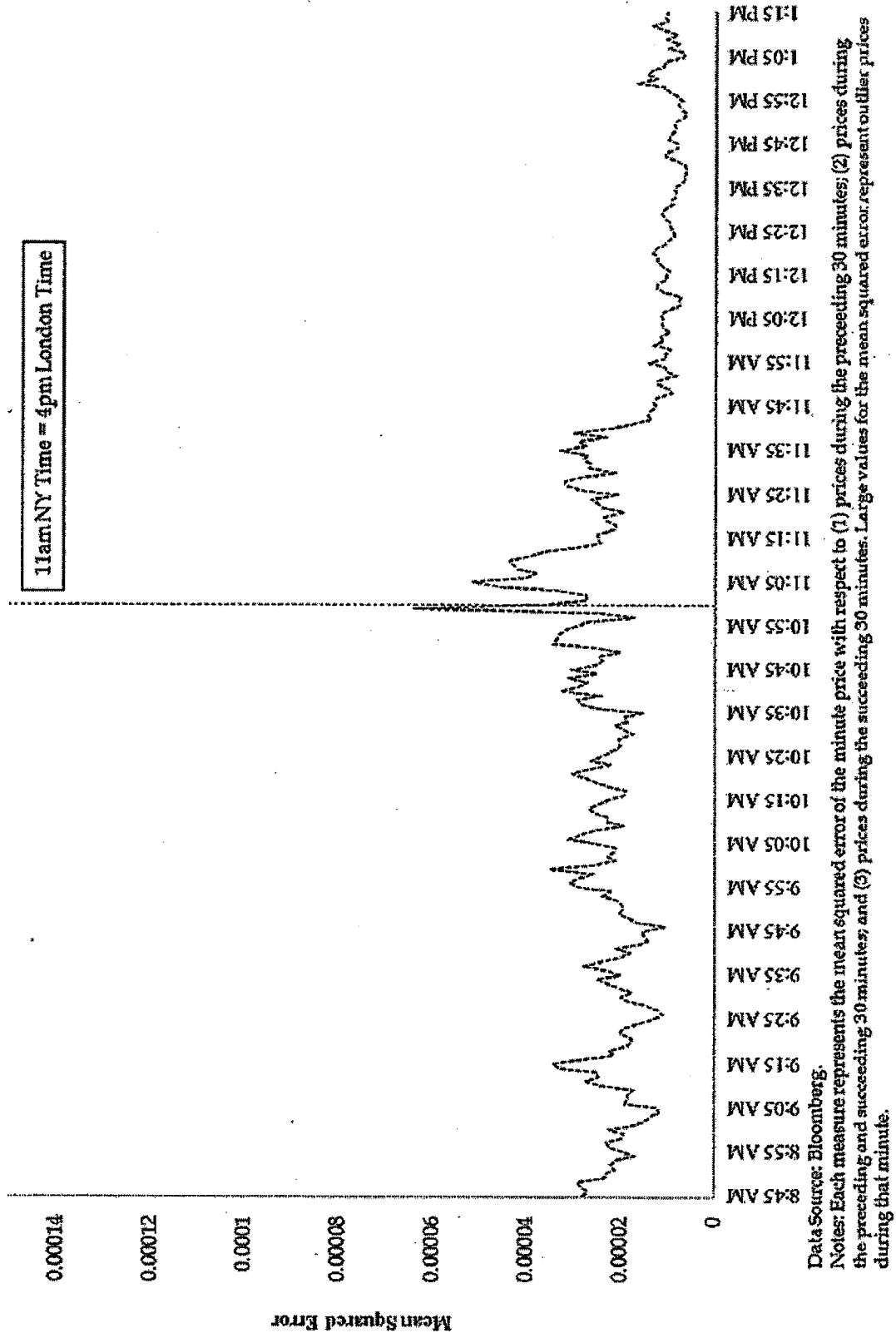


FIGURE 91

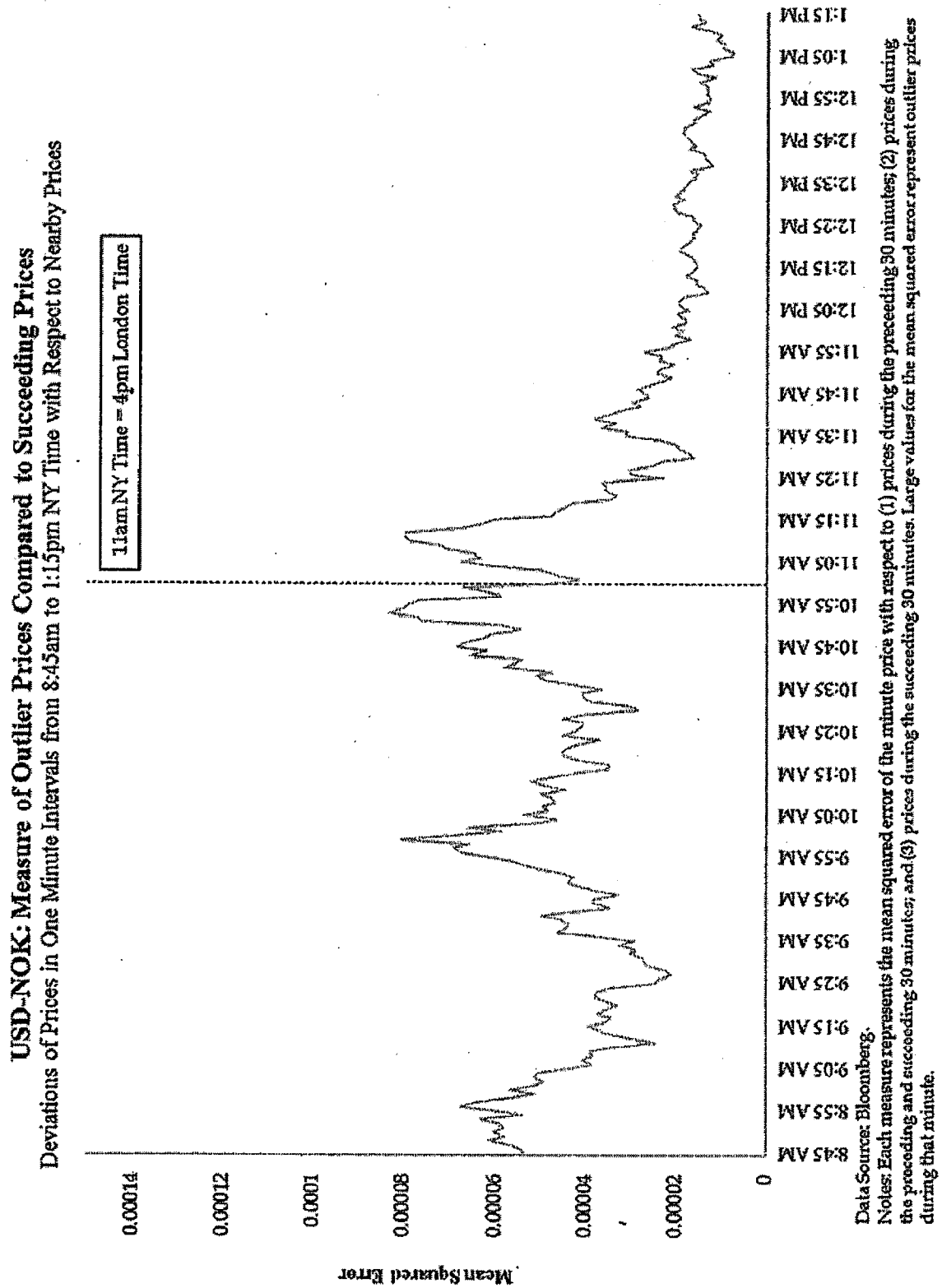


FIGURE 92

USD-NOK: Summary of Outliers				
Last Trading Day of Each Month (Jan 2009 - October 2013)				
		+/- 10 Minutes from 11am NY (4pm London)	+/- 20 Minutes from 11am NY (4pm London)	+/- 30 Minutes from 11am NY (4pm London)
Full Period	Total Number of Days	52	52	52
	Non-Outlier Days	27	24	23
	Number of Outlier Days Comparing Price to Preceding Prices	13	12	12
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	8	8	9
	Number of Outlier Days Comparing Price to Succeeding	4	8	8
	Total Number of Outlier Days	25	28	29
	Number of Outlier Days as a Portion of All Days	48.1%	53.8%	55.8%
2009	Total Number of Days	12	12	12
	Non-Outlier Days	4	2	2
	Number of Outlier Days Comparing Price to Preceding Prices	5	6	6
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	3	3	3
	Number of Outlier Days Comparing Price to Succeeding	0	1	1
	Total Number of Outlier Days	8	10	10
	Number of Outlier Days as a Portion of All Days	66.7%	83.3%	83.3%
2010	Total Number of Days	11	11	11
	Non-Outlier Days	5	5	4
	Number of Outlier Days Comparing Price to Preceding Prices	2	1	2
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	3	3	3
	Number of Outlier Days Comparing Price to Succeeding	1	2	2
	Total Number of Outlier Days	6	6	7
	Number of Outlier Days as a Portion of All Days	54.5%	54.5%	63.6%
2011	Total Number of Days	10	10	10
	Non-Outlier Days	6	5	5
	Number of Outlier Days Comparing Price to Preceding Prices	3	2	1
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	1	1	2
	Number of Outlier Days Comparing Price to Succeeding	0	2	2
	Total Number of Outlier Days	4	5	5
	Number of Outlier Days as a Portion of All Days	40.0%	50.0%	50.0%
2012	Total Number of Days	10	10	10
	Non-Outlier Days	5	5	5
	Number of Outlier Days Comparing Price to Preceding Prices	3	3	3
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	1	1	1
	Number of Outlier Days Comparing Price to Succeeding	1	1	1
	Total Number of Outlier Days	5	5	5
	Number of Outlier Days as a Portion of All Days	50.0%	50.0%	50.0%
2013	Total Number of Days	9	9	9
	Non-Outlier Days	7	7	7
	Number of Outlier Days Comparing Price to Preceding Prices	0	0	0
	Number of Outlier Days Comparing Price to Preceding Prices and Succeeding Prices	0	0	0
	Number of Outlier Days Comparing Price to Succeeding	2	2	2
	Total Number of Outlier Days	2	2	2
	Number of Outlier Days as a Portion of All Days	22.2%	22.2%	22.2%
Data Source: Bloomberg.				
Note: Interval of time is defined around 11 a.m. NY time / 4 p.m. London time.				

FIGURE 93

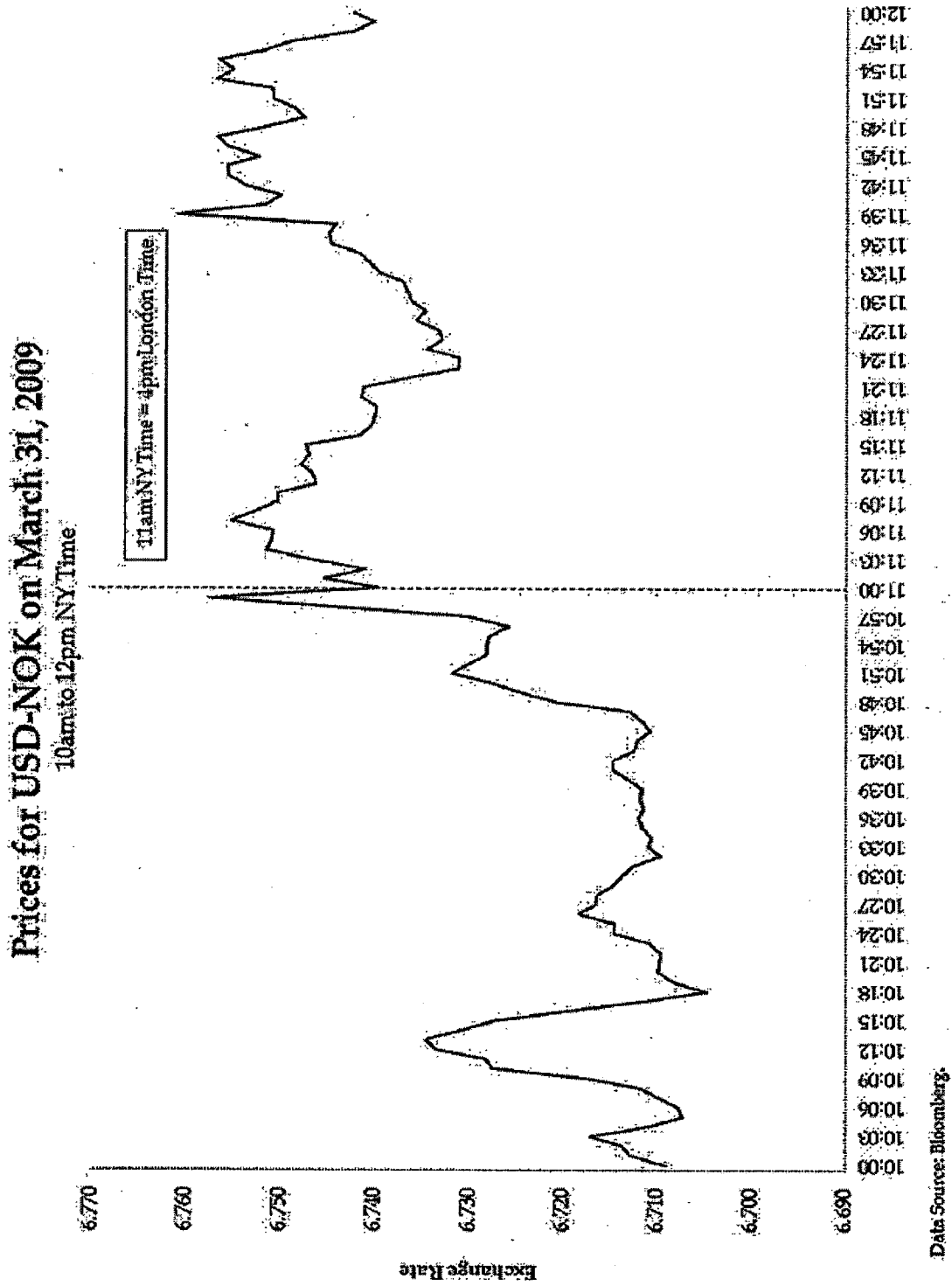


FIGURE 94

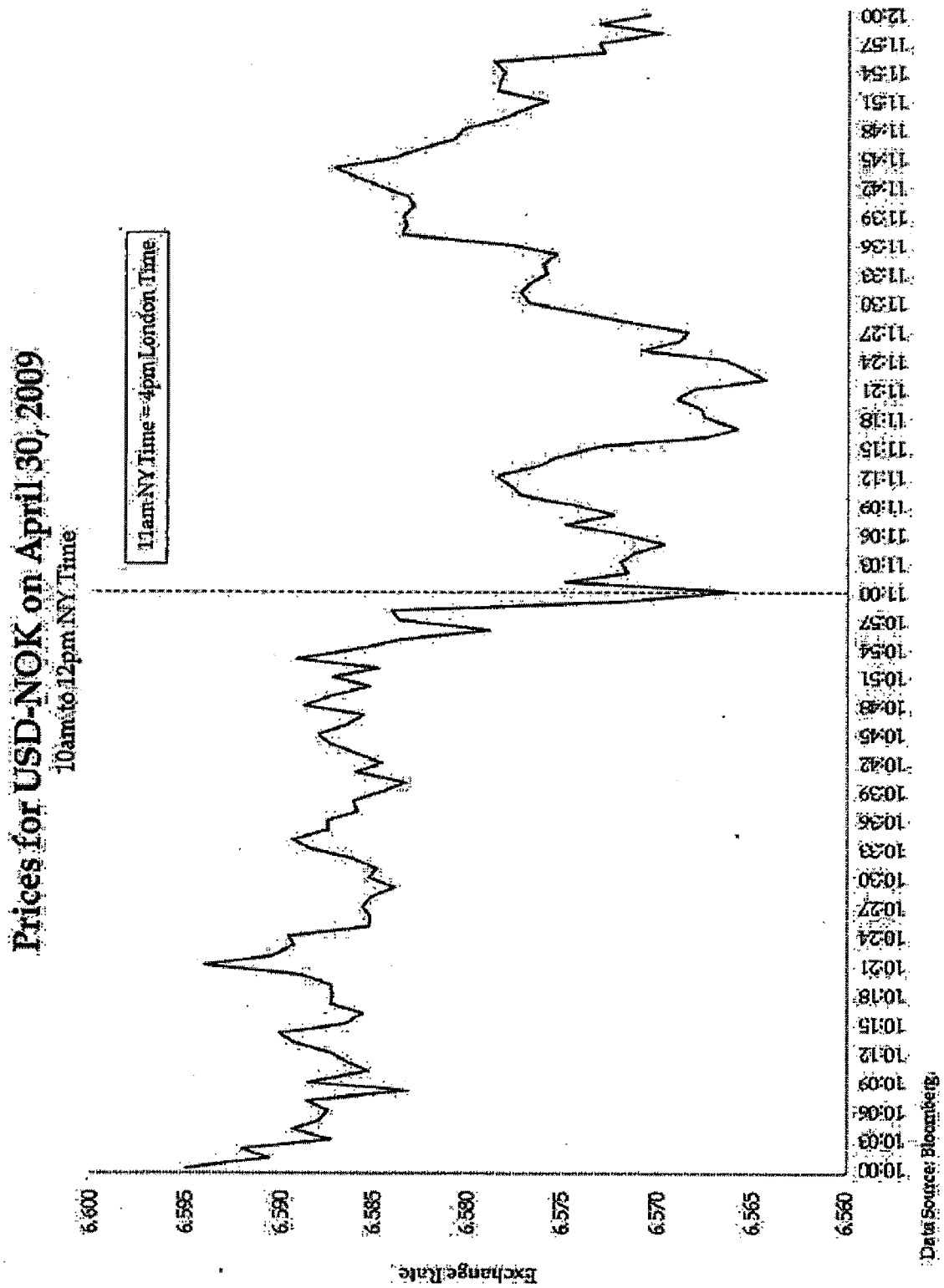


FIGURE 95

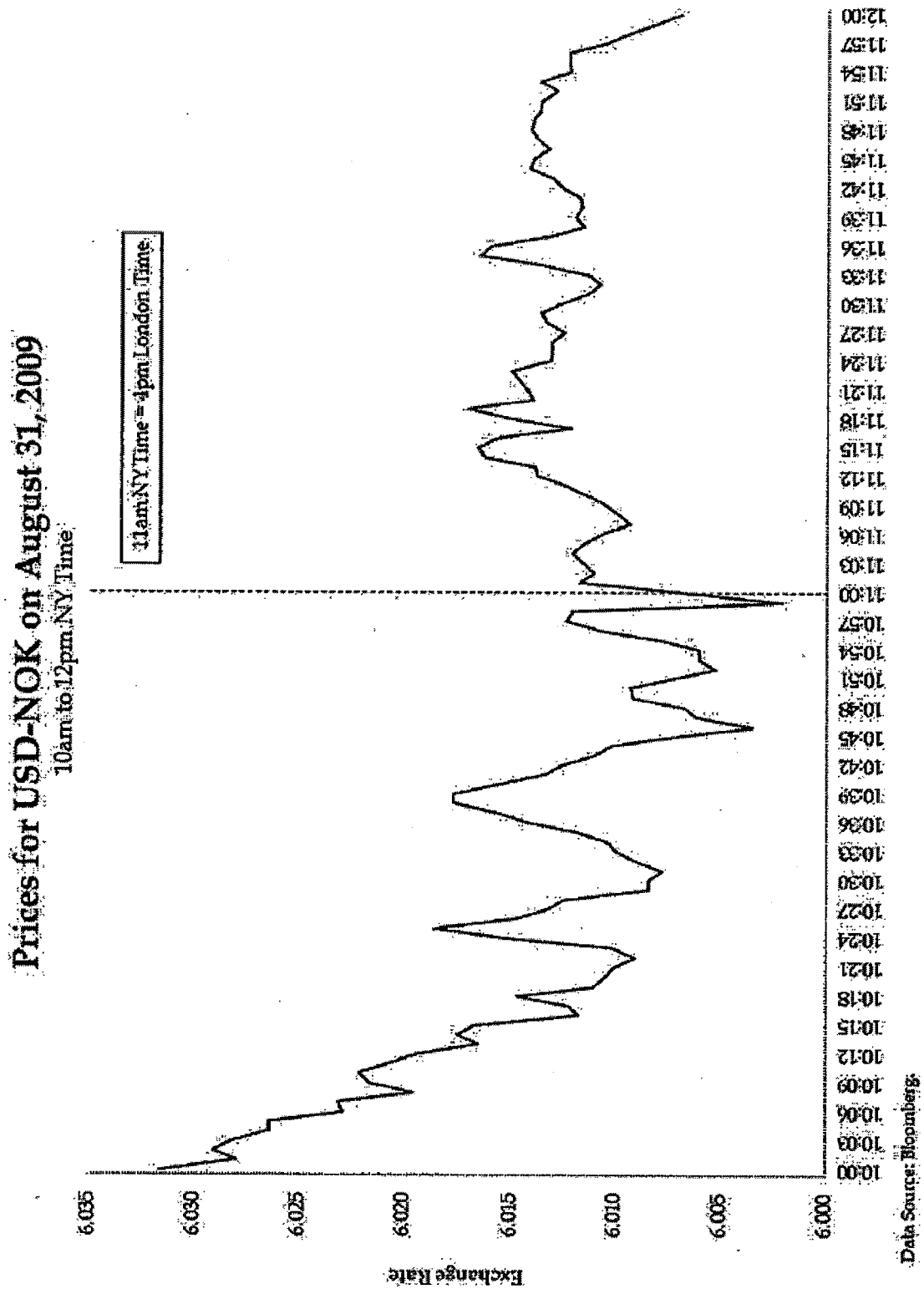


FIGURE 96

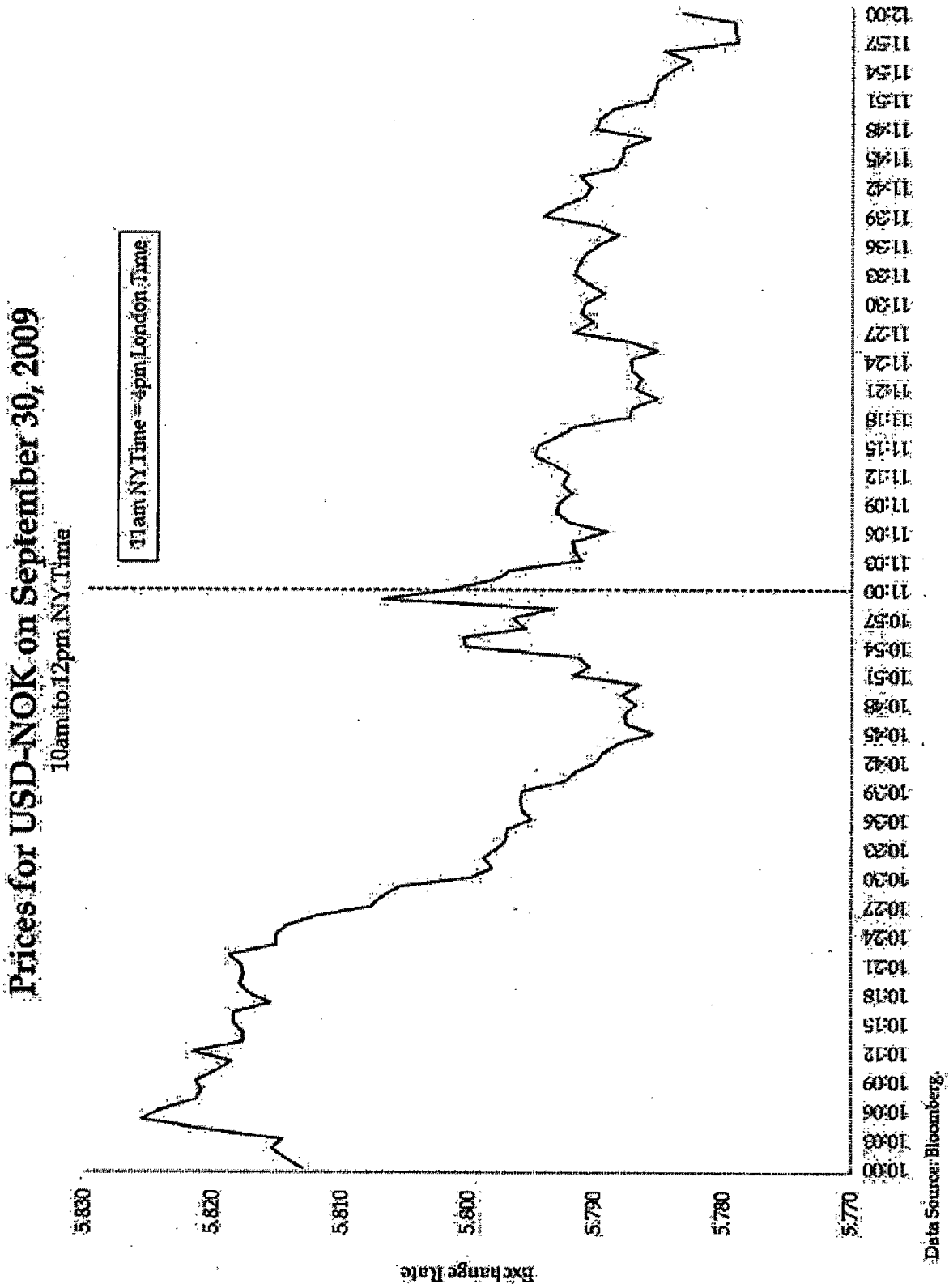


FIGURE 97

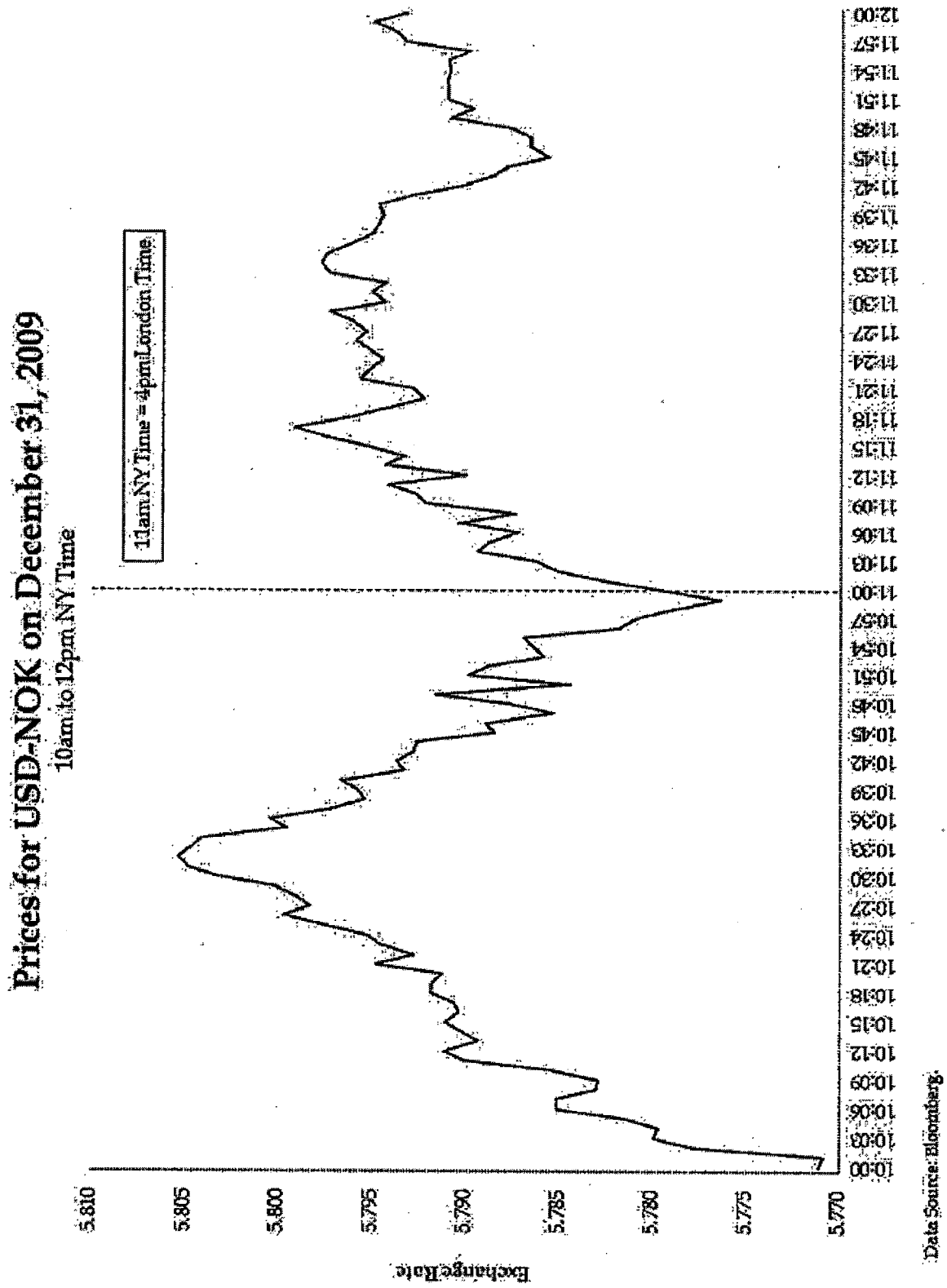


FIGURE 98

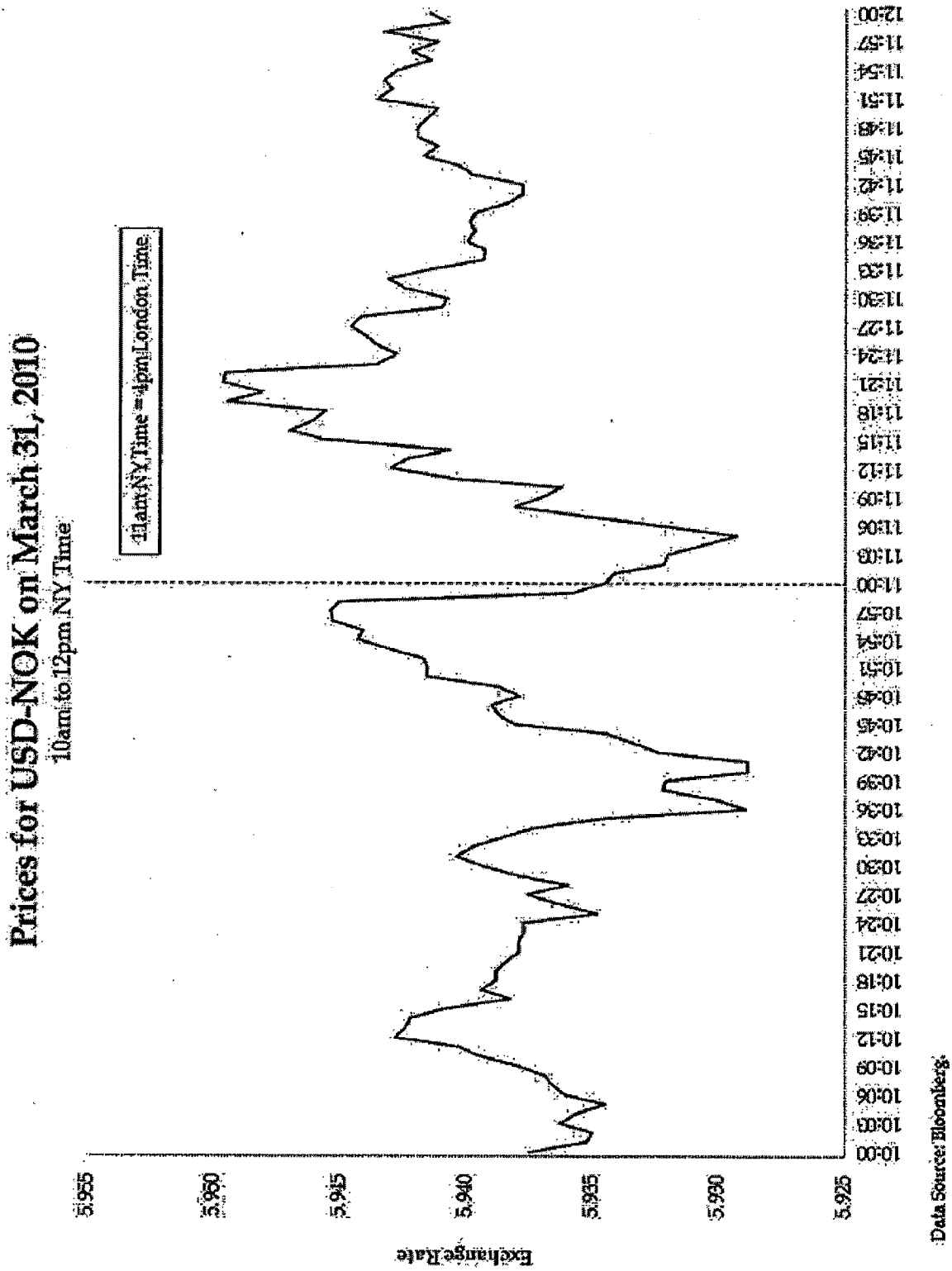


FIGURE 99

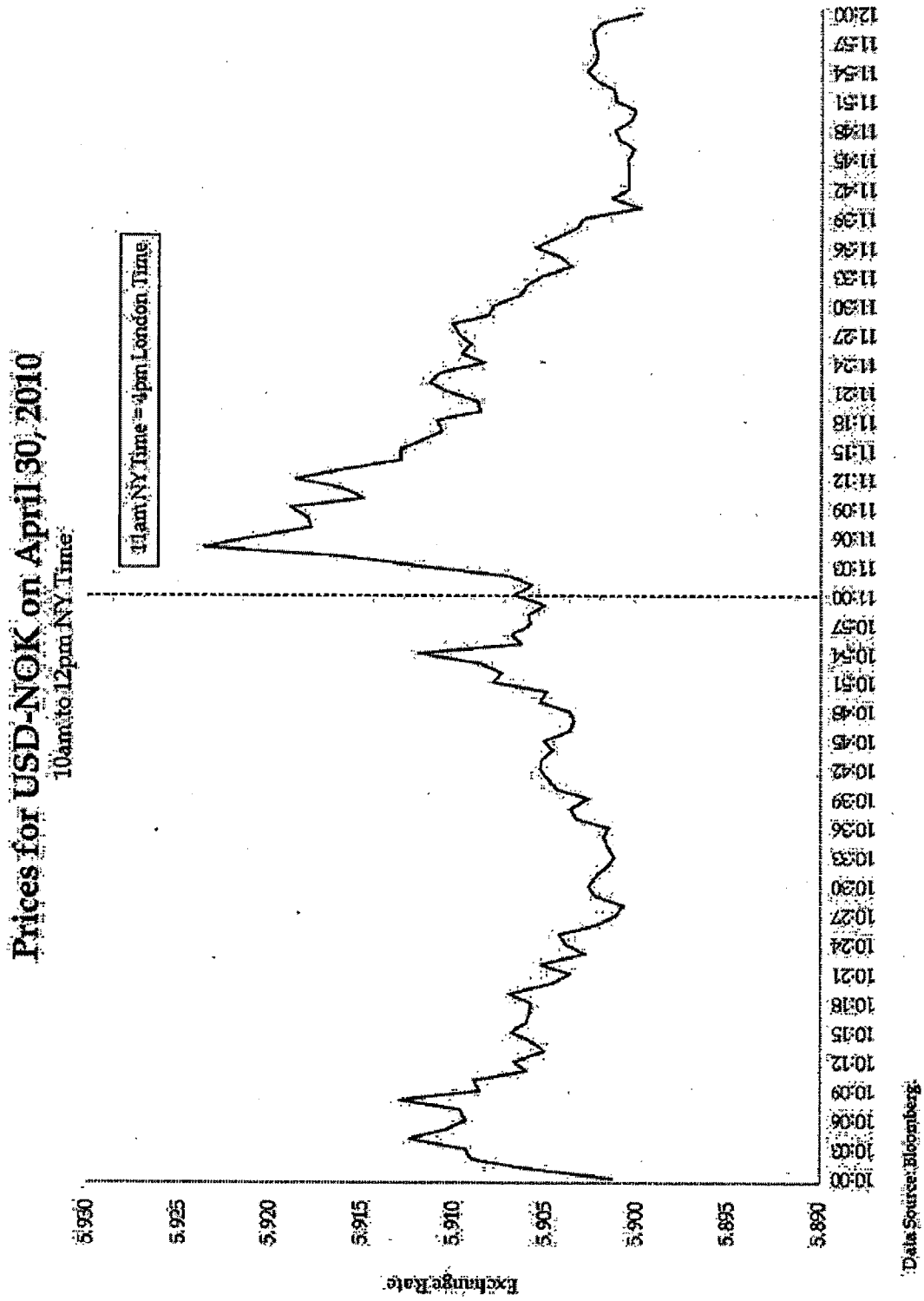


FIGURE 100

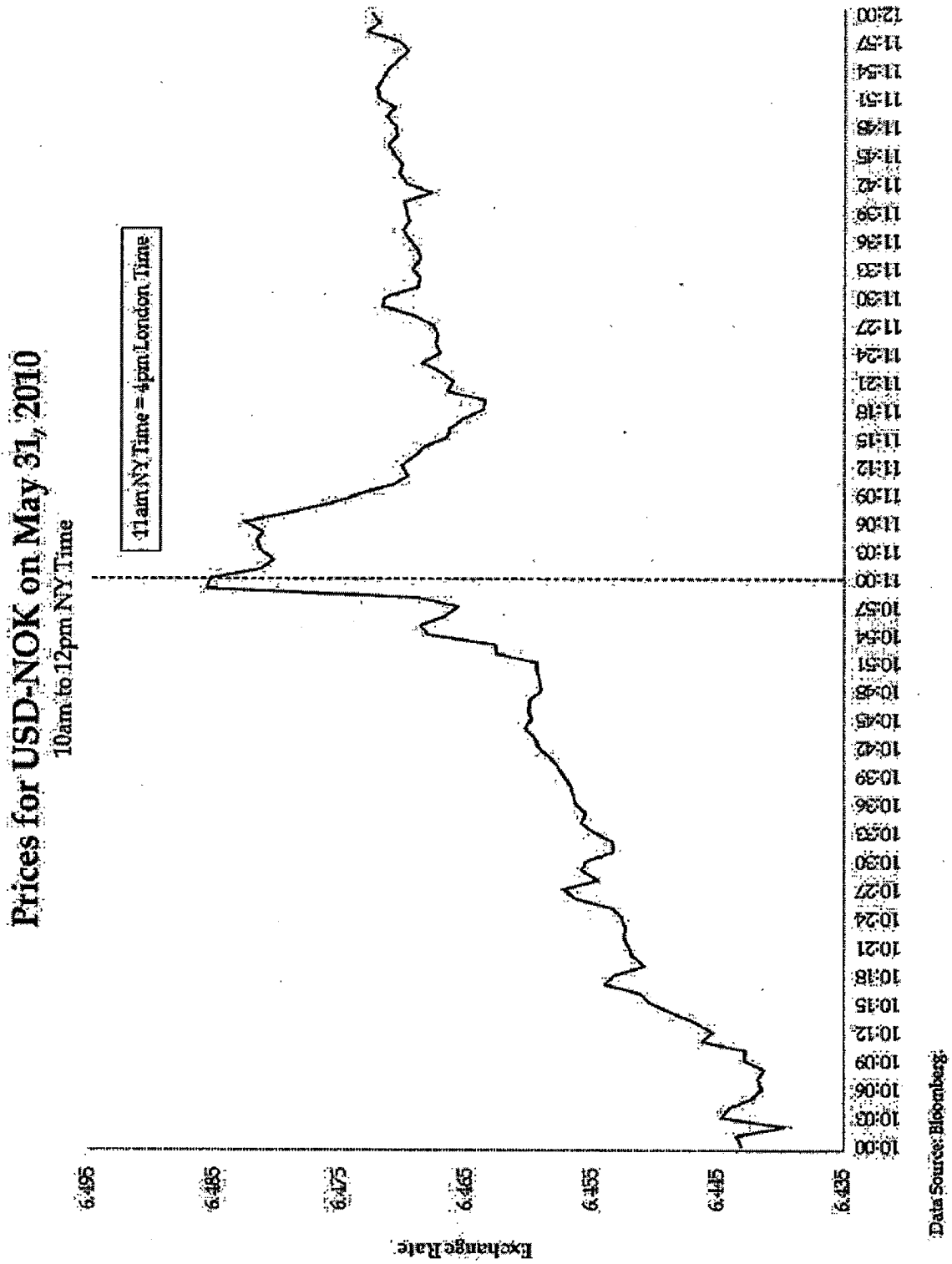


FIGURE 101

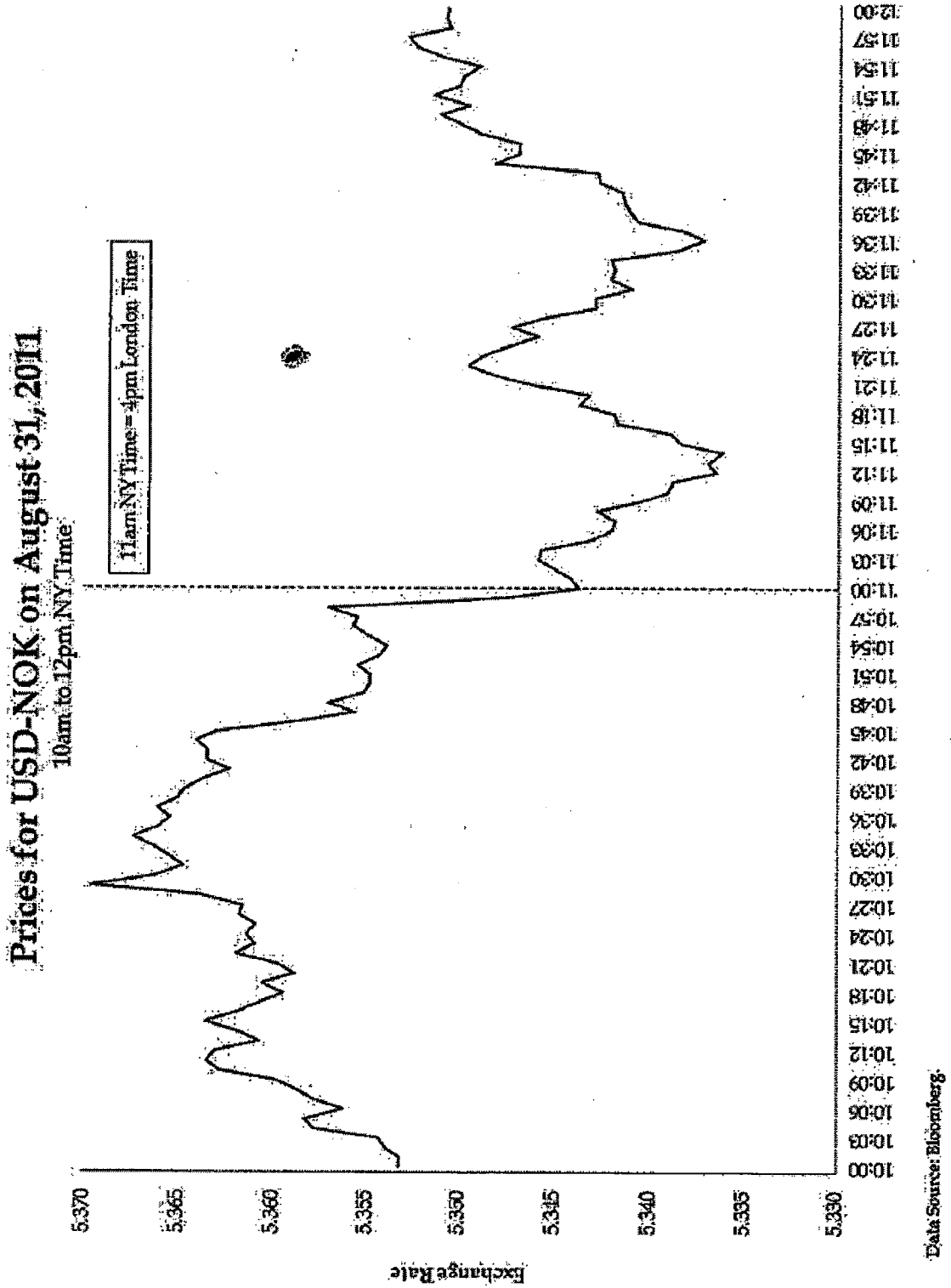


FIGURE 102

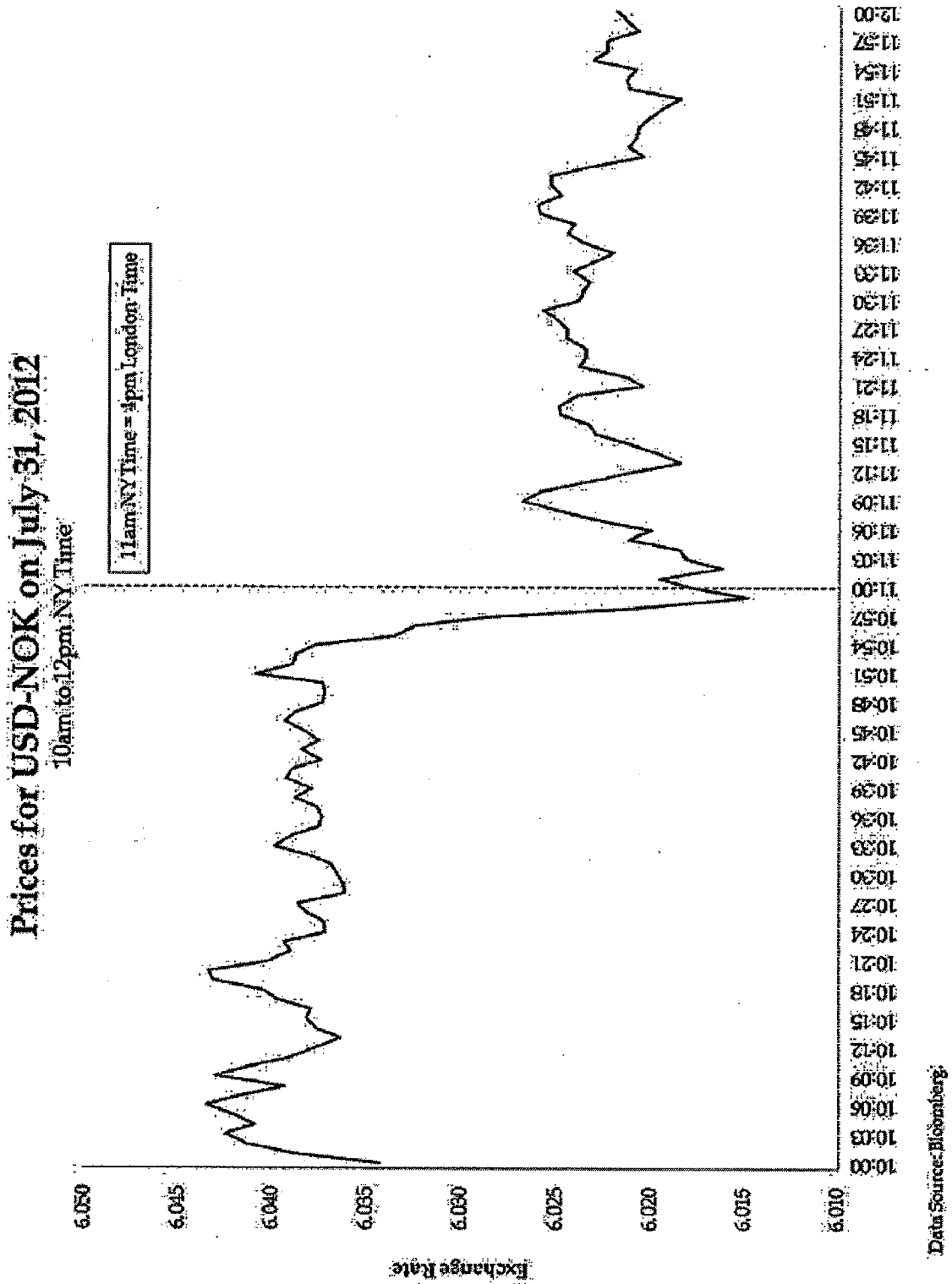


FIGURE 103

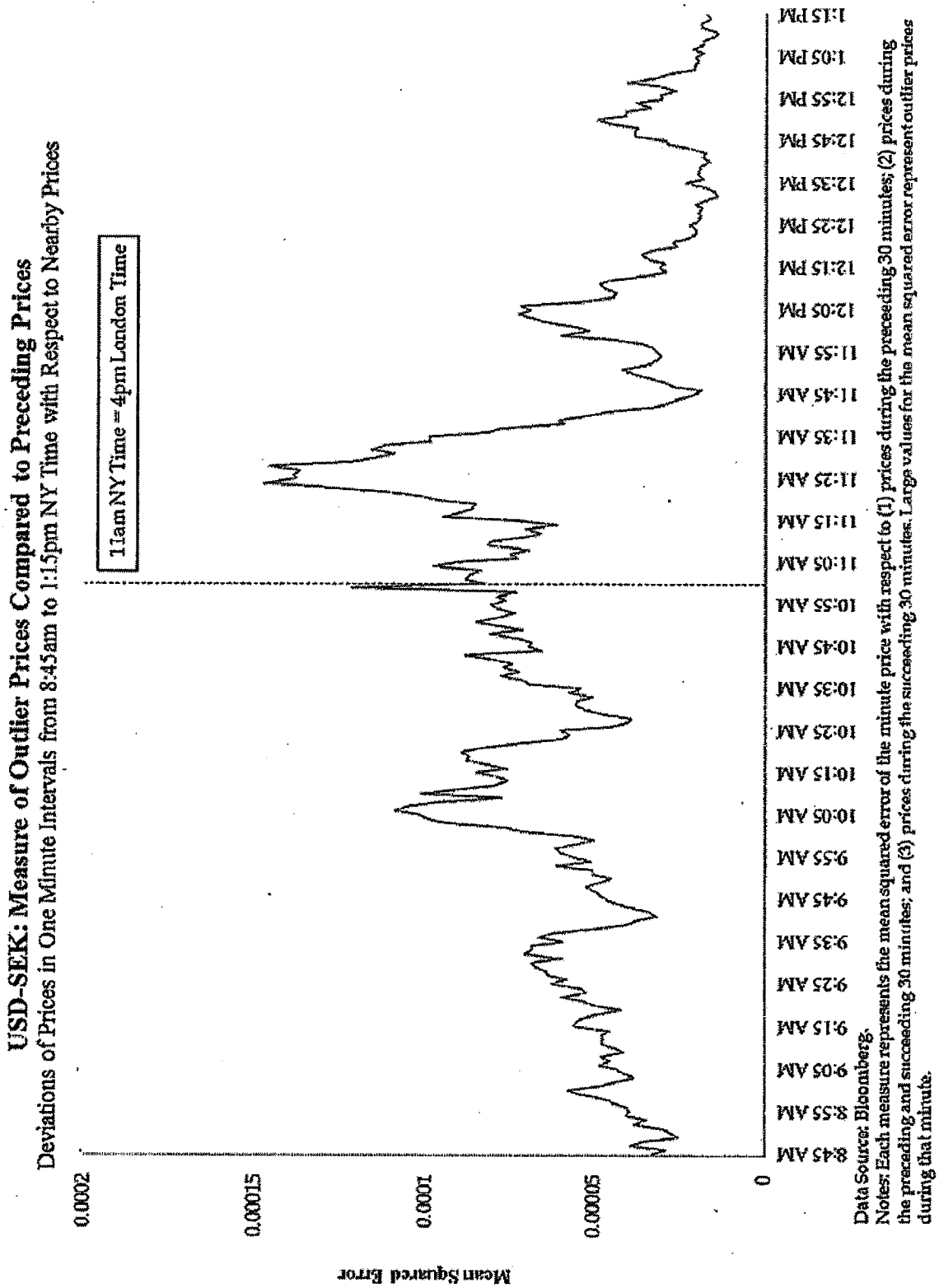


FIGURE 104

USD-SEK: Measure of Outlier Prices Compared to Preceding and Succeeding Prices

Deviations of Prices in One Minute Intervals from 8:45am to 1:15pm NY Time with Respect to Nearby Prices

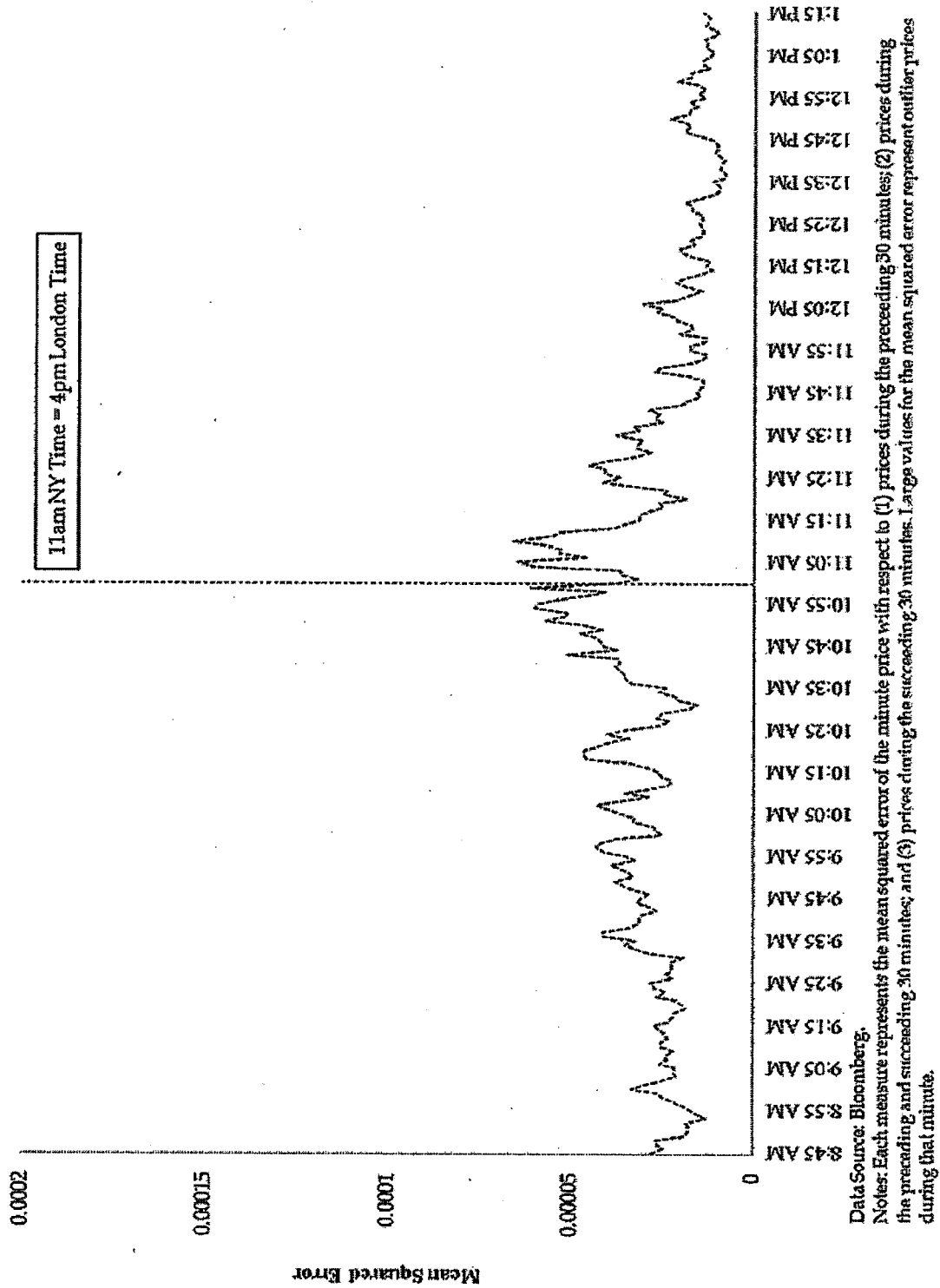
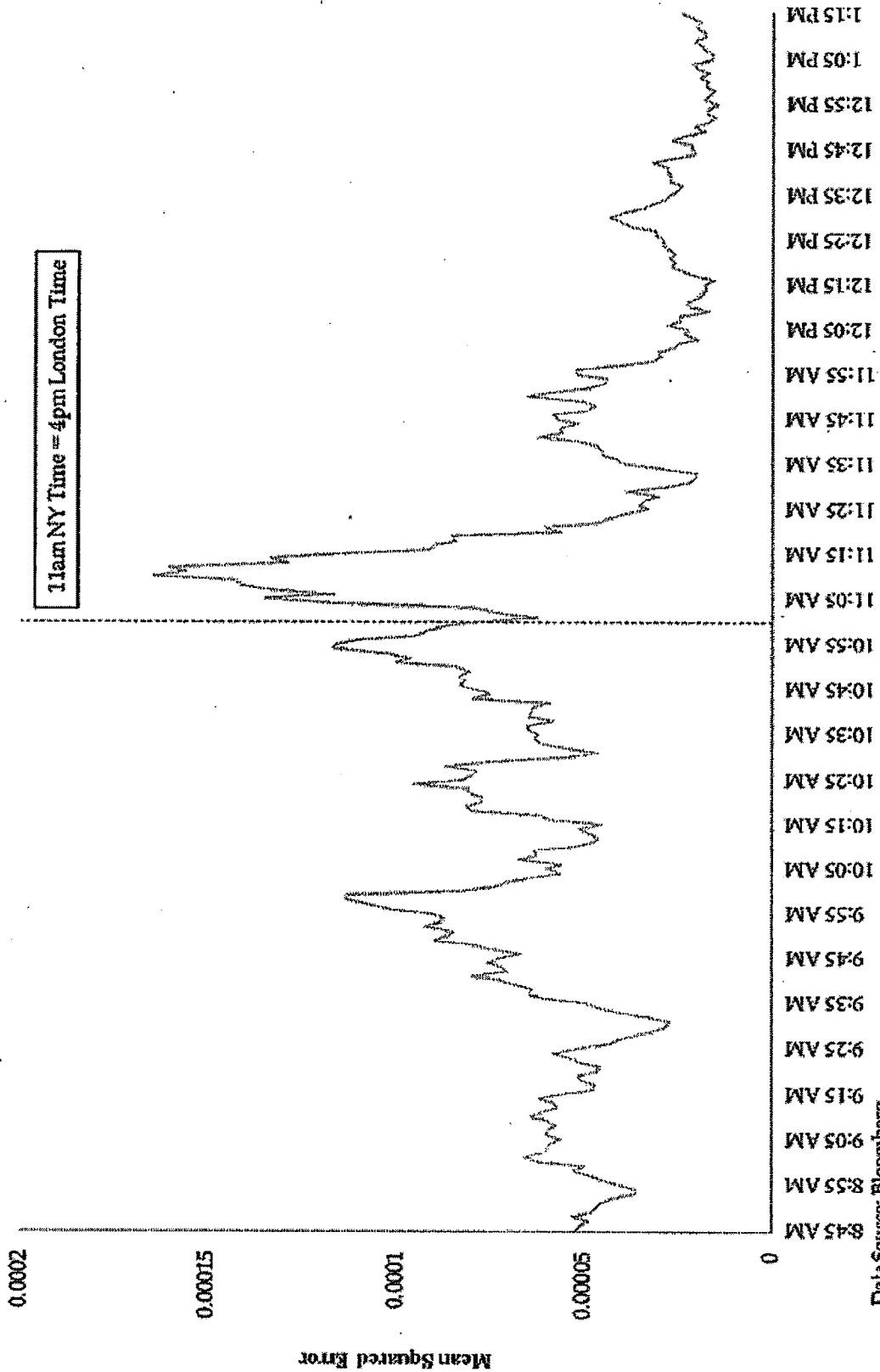


FIGURE 105

USD-SEK: Measure of Outlier Prices Compared to Succeeding Prices
 Deviations of Prices in One Minute Intervals from 8:45am to 1:15pm NY Time with Respect to Nearby Prices



Data Source: Bloomberg.

Notes: Each measure represents the mean squared error of the minute price with respect to (1) prices during the preceding 30 minutes; (2) prices during the preceding and succeeding 30 minutes; and (3) prices during the succeeding 30 minutes. Large values for the mean squared error represent outlier prices during that minute.